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ABSTRACT

The third of the series of annotated bibliographies on doctoral research, this compilation focuses on early childhood education for the disadvantaged, concentrating on such issues as reading, parent involvement, teachers and paraprofessionals, summer programs, and the like in regard to Head Start programs; Follow Through programs; Negro dialects, pre-kindergarten, and kindergarten and first grade in the consideration of issues related to language; reading and mathematics; behavior and attitudes; parent involvement in general; and, creativity. The bibliography carries subject, author, and institutional indexes to the citations. The citations, again, have been compiled from "Dissertation Abstracts International" and relate to current research through the June 1972 issue of the latter abstract journal. Order numbers have been provided at the end of each citation and dissertations may be bought in microfilm or hard copy from University Microfilms, Ann Arbor, Michigan. (RJ)

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EARLY CHILDHOOD EDUCATION FOR THE DISADVANTAGED:
AN ANNOTATED BIBLIOGRAPHY OF DOCTORAL DISSERTATIONS

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Preface

The seven years since the enactment of ESEA Title I in 1965 provided a unique opportunity for anthropologists, sociologists, psychologists, political scientists, educators, and others to attempt to find answers to unanswered questions about the teaching-learning process, especially in relation to minority group children and youth and to students from low socioeconomic backgrounds. Not only did the law provide extensive funds for compensatory and innovative programs, but it also mandated built-in evaluation measures. The flood of new programs provided fertile grounds for doctoral dissertation research on the education of the disadvantaged.

The plaintive cry of most students completing doctoral dissertations has been "all that work and where does it lead?" Bits and pieces of research throughout the country are entombed in Dissertation Abstracts International and in university libraries with only upcoming doctoral students forced to survey what has been done so that new outlines will not duplicate what has already been completed.

The ERIC/IRCD staff, believing that much could be learned about doctoral research itself, about children, and about educational programs, decided to attempt to provide comprehensive collections of abstracts in those areas of special interest to the Center. This document is one of several being prepared for a new series of publications entitled ERIC/IRCD Doctoral Research Series.

The first step taken was to do a computerized search, using the Datrix system, of the available tapes of Dissertation Abstracts International from 1965 to 1969 employing the following special descriptors: black, Puerto Rican, Mexican American, inner city, poverty, ghetto, urban, slum, rural, Negro, American Indian, and disadvantaged. The computer printouts of the resultant lists were then screened to eliminate all except those abstracts which clearly related to educational programs for the disadvantaged.

A hand search was then conducted for documents appearing in the January 1970 to June 1972 volumes to bring the collection as up to date as was possible at that time. Descriptors used for the hand search were: disadvantaged, desegregation, inner city, black, Negro, American Indian, Mexican American, Puerto Rican, (Spanish surname added later).

In all, over 700 abstracts were photocopied, sorted, and indexed. All indexing in Dissertation Abstracts International is based on titles rather than on abstracts. There are limitations resulting from the omission of other descriptors and computer or human oversight.

It is expected that each of the collections will, by providing all related abstracts in one document, be of value to many lay, professional, school, and university groups.

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numbers have been provided for each dissertation at the end of the citation. Prices have not been indicated because of past or possible future changes. In addition, dissertations may frequently be borrowed on inter-library loan from the sponsoring universities.

Each collection is organized in the following way. Documents are first grouped under main topics. Under the main headings, abstracts are presented in order of year of completion. Where a number of abstracts appear under a topic and in the same year, they are then arranged in alphabetical order by name of author. There is also a subject index, which includes several references for each abstract, an author index, and an institution index.

In the interest of objectivity and comprehensiveness, all appropriate documents have been included even though many present conflicting views, and do not necessarily represent the Center's policy or position.

The Center would like to be informed of other appropriate dissertations in these categories since there are plans to update and supplement these collections in the future. The name of the author, the title of the dissertation, and the month and year of completion is the only information required.

* * * * *

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Early Childhood Education

Head Start Programs--Reading

1. Boercker, Marguerite J. The Effect of an Eight-Week Head Start Program on Reading Achievement as Measured at the End of First Grade. University of Kentucky, 1967. 78p. Adviser: Dr. Wallace Z. Ramsey. 69-18,233.

The purpose of this study was to discover the effect of Summer 1965 Head Start experiences of Scott County, Kentucky, first graders on their reading achievement as measured by a standardized test at the end of the first grade.

A variety of background data was collected from the permanent record cards of all the 1965-66 first graders of Scott County. Mental maturity tests were administered to them near the end of the first semester, and reading achievement tests at the end of the school year.

The data were processed and analyzed to answer the questions: (1) What are the pertinent characteristics of the children who participated in Project Head Start? How do the Head Start children differ? (2) What variables may be seen to relate to the measured reading achievement of 1965-66 Scott County first graders? (3) When the Head Start and non-Head Start groups are equated for pertinent variables, is there a detectable and significant effect of the Head Start program on the reading achievement of the 1965-66 Scott County first graders? and (4) Which of the two approaches to the teaching of reading used in Scott County first grades seems to better exploit the benefits of the Head Start program?

It was found that the Head Start and non-Head Start groups differed on two social factors: socio-economic level and racial make-up. The Head Start group tended to come from the lower socio-economic levels and included the larger proportion of Negro children. Too, the Head Start group measured less ready to learn on a readiness test and in terms of mental maturity. They included the larger proportion of poor readers. The Scott County Head Start program seemed to have included those children for whom Project Head Start is intended.

Four of the five variables which correlate with reading achievement in this study are variables in which the Head Start and non-Head Start groups differ. This phenomenon may indicate that when pre-school programs work with those factors which differentiate the underprivileged child from the privileged, they work on factors pertinent to his learning to read.

When the Head Start and non-Head Start groups were equated for pertinent variables (race, occupation of the wage earner, readiness percentile score, mental age, and type of reading approach) and their reading scores compared, only one significant difference in means could be attributed to the eight-week Head Start program.

The brighter Head Start children of the skilled wage earners achieved significantly better than did their non-Head Start counterparts. General profit from the program was indicated. Although the Head Start group measured less ready to learn to read, a straight, unequated, comparison of the reading scores of the two groups revealed no significant difference in achievement.

The synthetic reading approach seemed to exploit the benefits of Head Start significantly better than the analytic.

The investigator concluded that an eight-week Head Start program yielded some benefit but was too short to be of significant advantage to the disadvantaged child. Since all mean scores were below national norms, the investigator suggests that full-year kindergarten of compensatory quality would better meet the readiness needs of all five-year-old children of Scott County, Kentucky, including those for whom Head Start is intended.

The coincidence of characterizing variables with factors which correlate with reading success indicates that the objective of Head Start is a realistic one. One question for future study is indicated: "What is the critical time needed for such a program to make a significant and on-going change in the learning patterns of the culturally deprived child?"

2. Bickley, Marion Thornton. A Comparison of Differences in Selected Educational Characteristics Among Culturally Disadvantaged Children Who Attended Project Head Start, Culturally Disadvantaged Children Who Did Not Attend Project Head Start, and Children Who Are Not Culturally Disadvantaged as Those Characteristics Relate to Reading Achievement in Grade One. University of Pennsylvania, 1968. 158p. Adviser: Mary E. Coleman. 68-14,468.

The purpose of the study was to investigate differences in selected characteristics during the second school year (grade one) in children who attended Head Start (summer 1965), and to determine the relationship to reading achievement. The subjects were 232 children in the Camden, New Jersey public school district enrolled in grade one during the school year 1966-67.

Children in ten classrooms of four elementary schools were represented. Three of the four schools served disadvantaged children. The children were divided into three major groups: Group A, culturally disadvantaged children who attended Head Start (summer 1965), (91 children); Group B, children who were eligible for but did not attend, (91 children); Group C, children who are not culturally disadvantaged, (50 children).

The following hypotheses were tested:

1. Culturally disadvantaged children who attended Head Start will obtain significantly higher reading readiness scores than culturally disadvantaged children who did not attend.

2. Children who attended Head Start will obtain significantly higher scores in reading achievement than culturally disadvantaged children who did not attend, but will not obtain scores as high as those of children who are not culturally disadvantaged.

3. Children who attended Head Start will obtain significantly higher scores in conceptual maturity than culturally disadvantaged children who did not attend.

4. Children who attended Head Start will obtain significantly higher scores in oral language variables than culturally disadvantaged children who did not attend.

The children in each major group were tested in the following characteristics: reading readiness (Durrell Analysis of Reading Difficulty, Reading Readiness); reading achievement (California Achievement Tests, Lower Primary, Form W); Conceptual maturity (Goodenough-Harris Drawing Test) for a man drawing and a woman drawing; oral language analysis for expression of complete thought (use of utterance rather than a complete sentence, subject, verb), and for complexity of structure (expression of place, manner, time, purpose or cause, and use of preposition plus the indirect object). Analyses were made from tape recorded individual interviews using a special devised scale.

Tests of reading readiness and reading achievement were administered by the school district; those of conceptual maturity and oral language usage by the investigator. Data were organized for computer processing by Multiple Analysis of Variance, MANOVA. Children who were not culturally disadvantaged were not considered comparable to culturally disadvantaged children. Group score means were compared to provide an indication of normal expectancy for the community (Camden). Analyses of variance were computed for the culturally disadvantaged groups, testing for differences related to Head Start attendance and teacher-class differences.

Hypothesis one was considered untenable. No significant difference was found in reading readiness scores between the culturally disadvantaged groups.

Hypothesis two was accepted with statistical reservations because (1) scores indicated a tendency approaching significance ($P > 0.075$), (2) there were no significant differences in reading readiness, (3) each teacher had samples of both culturally disadvantaged groups, (4) a larger sample would produce a more powerful test, and (5) the limited scope of the grade one reading program. Head Start children scored lower than children not culturally disadvantaged.

Hypothesis three was partially tenable. No significant difference was found for man drawing, but the woman drawing reflected significantly higher scores ($P < 0.032$).

Hypothesis four was accepted. Highly significant differences ($P < 0.001$), in favor of Head Start children, were found in three indicators of complete thought and in three of five indicators of complex structure, and significance in the fourth indicator ($P < 0.013$).

Since Head Start scores in reading achievement did not reflect superior achievement in concept maturity and oral language, it is suggested that the instructional program did not utilize the children's

full potential.

Findings imply a need for longitudinal studies and more advantageous teaching methods.

3. Carleton, Raymond Charles. An Evaluative Study of the Frostig Program in Remediating Visual-Perception Deficits With a Group of Head Start Children. Wayne State University, 1969. 73p.
Adviser: Walter J. Ambinder. 71-29,949.

Many children begin school with a variety of covert, "invisible" handicaps that preclude effective learning. The literature shows that traditional pre-school (nursery) programs, including Head Start, have not been successful in alleviating this problem.

The major thesis of this study is that most of these pre-school programs fail because they merely duplicate experiences received elsewhere with little regard for the appropriateness of the program to the individual child's developmental level or to his specific needs. The purpose of this paper is to evaluate one promising method of early prediction, diagnosis and remediation of learning difficulties developed by Marianne Frostig and associates. Frostig has developed a visual perception test and a rather complete remedial training program to be used in conjunction with the test.

This investigation was made to evaluate the effectiveness of the Frostig Remedial Program with a group of pre-kindergarten children involved in a summer Head Start program. The subjects selected for this study were drawn from all groups of those children who were to enter kindergarten in the ensuing Fall. The Frostig D.T.V.P. was administered to all children in this category. All those children who were below average (Perceptual Quotients below 90) in visual perception skills were then randomly assigned to experimental and control groups after being tested with a measure of mental ability (The Columbia Mental Maturity Scale). Subsequently, the experimental group received daily 30 minute training sessions with the Frostig Remedial Program for a period of four weeks. Both the experimental and control groups were then retested with the Frostig D.T.V.P. and the Columbia Mental Maturity Scale. Eight and one half months later, both groups' readiness skills were assessed with the Brenner-Gestalt Readiness Test and evaluated for any transfer effect as a consequence of the Frostig Training Program.

Three hypotheses were tested:

1. Would there be a significant gain in visual perception skills for the experimental group?
2. Would there be a concomitant increase in mental ability?
3. Would the anticipated increases in visual perception skills result in significant differences in academic readiness skills when measured toward the end of kindergarten?

The results showed the following:

1. The experimental group made significant gains in visual perception as measured by the Frostig D.T.V.P. The gain scores were

- greater than any found in the literature and this effect was obtained in four weeks.
2. Both the control and experimental groups made significant gains on the Columbia Mental Maturity Scale. Thus no transfer effect could be attributed to the treatment alone.
 3. There was no significant difference in readiness skills between the experimental and control groups when measured toward the end of kindergarten.

These findings suggested the following conclusions. The Frostig Training Program appears to be very effective in increasing those skills measured by the Frostig test. As indicated, the gains were greater than any found in the literature. These large gains may be attributable to the fact that only "low perceivers" were used in this study. Second, both groups had a significant gain in I.Q. (Columbia) with a slight (non-significant) trend in favor of the experimentals. It was felt that the similarity between the Frostig training, and abilities assessed on the Columbia may have accounted for the trend of experimentals showing greater I.Q. gains on the Columbia. The fact that both groups showed gains may be attributed to the newness of the school and test experiences, and that in the course of the training program the children may have become "test wise". Finally, whatever differences that existed in visual perception skills at the end of the treatment period did not appear to generalize and have any long-term effect on readiness skills.

4. Jackson, Dollie Joyce. A Comparison of the Academic Achievement in Grades Two and Three of Children Who Attended an Eight-Week and an Eight-Month Head Start Program. The University of Tennessee, 1969. 141p. Adviser: Orin B. Graff. 70-17,824.

This study was a follow-up of one which was written by Milton S. McDonald, superintendent of the city schools in Rome, Georgia. McDonald organized and administered two Head Start programs--one eight weeks and one eight months in length--in 1965. His study was an attempt to determine the immediate effects on the Head Start children in the areas of mental maturity and reading readiness.

The major purpose of this study was to evaluate the effects of Head Start on the academic achievement of those participants in McDonald's study who progressed to grades two and three. Four groups of children were included: (1) one group of lower class children who attended McDonald's eight-week Head Start program; (2) one group of middle class children who completed the eight-week program; (3) one group of lower class children who participated in the eight-month program; and (4) one group of children who had experienced eight months of private kindergarten.

Results of the California Achievement Test which was administered at the beginning of grades two and three showed no significant differences existed in grades two or three between the three Head Start groups in reading vocabulary, reading comprehension, mathematical

reasoning, and total achievement. The eight-month group, however, did score significantly higher at the .01 level than the eight-week lower class group in mathematical fundamentals in grade two. In grade three, results on the t -tests revealed there was a significant difference at the .05 level in favor of the eight-week middle class group when compared with the eight-month group in Language Usage.

There was a significant difference at the .001-level in favor of the middle class kindergarten group in all the cognitive areas when they were compared with the three Head Start groups.

An analysis of variance revealed there was a significant difference at the .001 level in total achievement scores made on the California Achievement Test by the Head Start children according to their sex, race, and the school they attended in grades two and three. The highest mean scores were made by white female students attending predominantly white schools. The lowest mean scores were made by Negro male students attending all-Negro schools.

5. Larsen, Janet Seger. A Study of the Intelligence and School Achievement of Children Previously Enrolled in Project Head Start. The University of Florida, 1969. 103p. Adviser: Dr. J. L. Lister. 70-14,890.

In 1965, the United States Office of Economic Opportunity initiated Project Head Start for children deprived through poverty of many important early childhood experiences. The summer program focused on the four- and five-year-old disadvantaged child. The purpose of this study was to evaluate the long-term effectiveness of a Head Start program. A follow-up study was made of children in Alachua County, Florida, who had participated in Head Start three years previously. Their intelligence and school achievement were evaluated.

Procedures included two methods of evaluation. The first involved pre- and posttesting of intelligence over a three-year period. Children selected for special testing during Head Start 1966 were readministered an intelligence test in 1969. The difference between pre- and post-I.Q. scores of the 23 Negro and 2 white children was tested for its significance.

The second method compared the present intelligence and school achievement of Head Start and non-Head Start children. The difference between the 1969 I.Q. scores and achievement scores of the 25 Head Start children and 25 children not having participated in Head Start was tested for its significance. The 2 groups of children were matched on 8 variables. Each Head Start child was paired with a non-Head Start child having the same sex, race, age, socio-economic status, date of school entrance, grade of entrance, type of school, and present grade placement.

Instruments of measurement were the Stanford-Binet Intelligence Scale and the Stanford Achievement Test, Battery II: subtests in Word Meaning, Arithmetic Computation, and Word Study Skills. The t statistic was used to test the hypotheses.

Results: 1. The mean difference between pre- and post-I.Q. scores of Head Start children was significant beyond the .01 alpha level, in favor of post-I.Q. scores.

2. The mean difference between 1969 I.Q. scores of Head Start children and non-Head Start children was not significant at the .05 alpha level.

3. The mean difference between 1969 reading achievement scores of the two groups was significant at the .05 alpha level in favor of the Head Start children.

4. The mean difference between 1969 arithmetic achievement scores of the two groups was not significant at the .05 alpha level.

5. The mean difference between 1969 word study skills achievement scores of the two groups was not significant at the .05 alpha level.

Conclusions: Although the Head Start children had a significant positive change in intelligence during the three-year period, they were not significantly different in I.Q. from disadvantaged non-Head Start children in 1969. Negro children in both groups had I.Q. scores that were considerably higher at the present time than would be expected when using Negro norms on the Stanford-Binet Intelligence Scale. White children were in the average range on the white norms. An inference was made that the non-Head Start children might also have had a positive change in intelligence during the three years in school. A factor that might have contributed to intellectual growth in both groups was the availability of Federal funds in the schools represented. The conclusion was made that positive change in intelligence of the Head Start group could not be attributed to the Head Start program but to some influence in the schools during the three-year period. It supports the concept that intelligence can change in a stimulating academic environment.

No significant difference was noted in the achievement areas of arithmetic and word study skills.

Head Start had made a significant difference in the area of reading. The program had such an impact that, after three years, children continued to be ahead of the non-Head Start children. This supports the concept that early verbal stimulation increases the readiness to read.

6. Messier, Louis Philip. Effects of Reading Instruction by Symbol Accentuation on Disadvantaged Five-Year-Old Children. Boston University School of Education, 1970. 86p. 70-22,460.

In considering methods for helping disabled children, an investigator soon is faced with the relative merits of maturational promotion and formal intervention. Should formal schooling (i.e., beginning of first grade academics) await certain maturational age (often chronological age or mental age of six) or should the maturation be aided (perhaps hurried) by a nursery or readiness program? This study is concerned with the question of the presence or absence of ability in the disadvantaged child to benefit from direct teaching of reading as readiness training. A companion question regarding

the effectiveness of Symbol Accentuation as a reading method for disadvantaged children is considered also.

Four intact classes of preschool-disadvantaged children were drawn from a Headstart population as the sample for this study. Two groups received reading instruction by the Symbol Accentuation method while the remaining two groups were observed as control or contrast groups. The Separate-Sample-Pretest-Posttest Control Group Design was the design configuration used with Metropolitan Reading Readiness test scores providing the pretest-posttest gain measures. Acquisition scores of content from the Symbol Accentuation reading method were recorded as conventional sight recognition gains, accentuated conventional recognition, and fully accentuated recognition.

The data are displayed as basal data derived from the Peabody Picture Vocabulary Test, individual and group Symbol Accentuation gains, and correlational as well as rank difference analysis of all test measures used.

D
Findings: The Symbol Accentuation (SA) Treatment Groups made similar sight recognition and word-blending gains when compared as groups. There is, existant, a condition of heterogeneity of groups, not anticipated originally, which resulted from the use of intact rather than randomized groups. The removal of those individual scores seen as most regressed from the mean had the effect of eliminating disparate means and allowed for parallel consideration of those means simultaneously as homogeneous and heterogeneous.

With extreme scores removed, one could generalize from the statistically significant mean difference from SA Group I and Group II, on the Metropolitan Reading Readiness (MRR) tests, to all groups. The indication is that SA had an incremental effect on the MRR posttest score not shown by the contrast groups.

Correlations between Peabody Picture Vocabulary Test scores (PPVT) and SA acquisitions are seen to be significantly related as opposed to the nonsignificant MRR and SA relationships.

Acquisition scores indicate that a progression was in progress from fully accentuated to conventional recognition of words as shown by cards and on the viewing screen.

Conclusion: There are many preschool reading methods being evaluated with disadvantaged children which have met with varying degrees of success and failure. Essentially, the successes were directly related to the intelligence, reading levels, and relative normalcy of the children as well as the interactive verve or interpersonal style of the teachers. While the present study produced results of mixed significance, both statistical and a priori, the general yield is such that a fertile basis is provided for modified replications of the study and a reassessment of the assumed disability of the disadvantaged child.

Clearly, the children in the study possess more facility for complex discrimination, ability to attend to tasks, and general intelligence than is indicated by basal and readiness measures. Within the limitations of the research methodology employed here, this study indicates the desirability of the use of direct reading instruction

as readiness training for the disadvantaged preschool child and Symbol Accentuation is indicated to be an effective method of teaching reading content to such children.

7. Turner, Robert Edward. Academic Benefits Accruing to Head Start Participants Through Grade Three in an Eight County Area of Southeast Arkansas. Northeast Louisiana University, 1970. 110p.
Adviser: Dr. T. Eugene Holtzclaw. 71-12,523.

The primary purpose of the investigation was to determine if academic benefits accrued to culturally deprived children as a result of their having participated in a Summer Head Start Program.

The investigation was concerned with academic achievement only, and no attempt was made to determine values received in other facets of the Head Start Program.

Specifically, the purpose of the study was to answer the following question: Is there significant difference in the achievement of Head Start participants and non-Head Start participants in reading and mathematics?

The population included all students who were enrolled in schools that had operated Head Start Programs for three years or more in an eight county area of Southeast Arkansas.

A sample of eight schools was randomly selected from the population. A total of 553 students was tested using the S.R.A. Primary Mental Abilities Test for students in grade one, and the S.R.A. Achievement Series, form C, for students in grades two and three.

Three groups of students were identified in the class sections selected. Group one consisted of first, second, and third grade children who were culturally and economically deprived, who were eligible for, and had participated in Project Head Start. Group two consisted of first, second, and third grade students who were culturally and economically deprived, who were eligible for, but had not participated in Project Head Start. Group three consisted of the remaining members of the selected class who were not eligible for Head Start.

The following are results of the statistical analysis and conclusions which are based on the analyses.

The results of the study for grade one indicated that the mean of group three was significantly higher at the .05 level than the mean of group one. The mean of group three was not significantly higher than the mean of group two, and there was no significant difference in the mean of group one and group two.

The results of the study for grade two indicated that the mean of group one was not significantly higher than the mean of group two. The mean of group three was significantly higher than the mean of group one and group two.

The results of the study for grade three indicated that the mean of group one was not significantly different from the mean of group two. The mean of group three was significantly higher than the mean of group one and group two.

The results of this study indicate that no lasting benefits in reading and mathematics are likely to accrue to a similar culturally deprived first, second, and third grade population, when exposed to Head Start Programs similar to that considered in this study and enrolled in educational programs also similar to the ones treated in this study.

Head Start Programs--

Parent Involvement

8. Chavez, Dan D. An Evaluation of Two Compensatory Pre-Kindergarten Programs. The University of Michigan, 1968. 109p. Adviser: Dan H. Cooper. 69-12,069.

Prior to the present study, an experiment was conducted in the Flint (Michigan) Community Schools during the 1964-1965 school year to evaluate the effectiveness of a compensatory pre-kindergarten program for children living in low socio-economic areas of the city. After the year-long compensatory program, the experimental group, that is, the group attending the compensatory pre-kindergarten program, scored significantly higher than a control group in the three areas tested: intelligence, vocabulary, and motor skills.

One objective of the present study was to ascertain whether the gains made by the experimental compensatory pre-kindergarten group were maintained after both experimental and control groups had attended the kindergarten.

During the summer of 1965, some of the children from both groups attended a Head Start program. A second objective of this study was to evaluate the effectiveness of a Head Start program in the areas of intelligence, vocabulary, and motor skills.

A third objective was to conduct case studies of selected children with the purpose of noting home factors which may have influenced the test performance of these children.

The experimental group in this study consisted of forty-seven subjects: twenty boys and twenty-seven girls. Thirteen of the experimental subjects attended the summer Head Start program.

The control group in this study consisted of twenty-seven subjects: twelve boys and fifteen girls. Nine of the control subjects attended the summer Head Start program.

The tests used in this study were the Columbia Mental Maturity Scale, the Peabody Picture Vocabulary Test; and the Motor Skills Test, and adaptation of the Kephart Perceptual Survey Rating Scale.

The statistical analysis technique used was an analysis of covariance. Statistical significance was accepted at the .01 level of confidence.

The findings of the study were as follows:

1. The experimental group maintained its significant advantage over the control group in motor skills but not in intelligence or vocabulary.

2. No significant differences were found between the Head Start children and the non-Head Start children in intelligence, vocabulary, or motor skills.

3. On the basis of the data obtained from the case studies, the writer makes the following two observations: First, the availability of educational materials at home, the provision of educational experiences outside of school, and frequent parent-child and parent-teacher contact seems to have been a favorable factor in the test performance of these children, whether or not the children had compensatory education. Second, a year-long compensatory program does not appear to

compensate for unfavorable home factors, such as lack of parental concern for education and crowded living conditions.

9. Kearney, Nancy Lillian Shoemaker. Attitude Change of Project Head Start Parents. The Pennsylvania State University, 1968. 94p. 69-14,530.

The study investigated attitudes toward education of mothers whose children had participated in Project Head Start. The population was from the culturally deprived community within York, Pennsylvania. Eight groups of twenty mothers each were randomly selected for the purposes of the study. All had children in poverty, but each group differed in chronology and the availability of public services to them. The study was conducted in 1968 and included mothers whose children participated in Project Head Start in 1965, 1966, and 1967.

The instruments used were a pretested educational attitude scale developed by Rundquist and Sletto, and an interview guide developed by the researcher to gain pertinent information concerning parents. Interviews were conducted by two persons from the indigenous community. No significant difference was found between the scores of subjects interviewed by different interviewers.

The mean of the total scores on the educational scale was reported by Rundquist and Sletto in 1936 is 51.69. The means of the total scores reported for this study varied by groups of the population from 75.75 for the Single Experience group to 98.50 for the No Experience group. This evidence suggests improved attitudes toward education in the 30 year period.

The general hypothesis of this study was that parents of children who have participated in Project Head Start will exhibit more positive attitudes toward education in general than similar parents whose children have not participated in Project Head Start. The data did not support the hypothesis. The group of parents who had not had children in Project Head Start exhibited more positive attitudes toward education than any of the Single, Double or Triple Experience groups of parents tested for the study.

The most visible reason why the data did not support the hypothesis is shown in the distribution of answers to two questions on the interview guide, "How many times did you visit the Project Head Start classroom,...and how many times did you help with the Project Head Start program?" Only five percent of the parents visited the classroom and only two and one half percent helped in any way with the program. The findings point to a need for parental involvement in the Project Head Start program if the federal directives for the operation are to be met and if positive results are to be shown. To effect positive results for the Project Head Start program, parents need to be involved and ways to involve them must be developed.

10. Kuipers, Judith Lee. The Differential Effects of Three Parent Education Programs on the Achievement of Their Children Enrolled in an Experimental Head Start Program. Michigan State University, 1969. 203p. 70-9579.

The purpose of this study was to train teachers to educate mothers to work-with their children in the home to further linguistic skills, intellectual performance, and self concept development. The study was designed to ascertain the effects of differentiated short term parent training as reflected in the intellectual, linguistic, and self concept performance of their children as measured by testing instruments. One hundred eight children and their parents participated in the parent education program for twelve weeks. Seventy-two rural white advantaged and disadvantaged Head Start children in six experimental Head Start classes and their parents were randomly selected for the sample. The six classes were randomly paired to obtain samples consistent with the proportion of advantaged and disadvantaged children in the total population. The pairs of classes were assigned to three treatment groups: the Developmental Language Treatment; the Structured Language Treatment; and the Workshop or Placebo Treatment.

Each group of mothers met in twelve weekly two hour sessions with their children's teacher. The general atmosphere was conceived to be one of parents and teachers working together to attain the goals and objectives of each program. Training and instructions to the teachers for each week's program was provided each Monday by the investigator. At these weekly orientations the trainer went over specifically prepared objectives, materials, and lessons with each pair of teachers. Each teacher met with the trainer each Friday for an evaluation of that week's program in terms of attendance, problems, and suggestions. The professional person involved in training was constant across all training groups in an attempt to minimize effects of trainer variability. Follow-up home visits were used to provide materials and directions to mothers unable to attend meetings. Other mothers came to the school for makeup lessons. Teachers refrained from direct use of materials developed for the training program in their own classroom programs.

Five testing instruments were used to test the intellectual, linguistic, self concept, and mother-child interaction performances. They were: (1) The Wechsler Preschool and Primary Scale of Intelligence, Record Form 1967, (2) The Illinois Test of Psycholinguistics, Revised Form, 1968, (3) MSU Self-Social Constructs Test, (4) The Hess and Shipman Mother-Child Interaction Tests, (5) MSU Experimental Tell-A-Story-Test. Tests were administered in October and again in April. These data were used to test the hypotheses of the study.

The major hypotheses predicted improved: (1) language performance; (2) intellectual performance; (3) self concept development; and (4) mother-child interaction as a result of a differentiated parent education language program. These hypotheses were tested by employing the following procedure: variables were submitted to a 2×3 analysis of co-variance model with eligibility and treatment as independent variables.

It was impossible to reject the null hypothesis for the five hypotheses stated in this study. However, treatment main effects on the Full Scale IQ reached the (.08C) level, and significant differences (.001 to .05) on various sub-tests across instruments as previously reported evidenced support in the direction of the first four alternate hypotheses, i.e. improved performance. In hypothesis five, sub-tests presented unequivocal evidence to support the null rather than the alternate hypothesis. That is, there were no significant differences in performance between the children in the Development Treatment Group and the Structured Treatment Group..

11. Barber, Adeline Zachert. A Descriptive Study of Intervention in Head Start. University of Georgia, 1970. 236p. Adviser: Rachel Sutton. 71-3711.

The purpose of the study was to develop a short term program of home intervention that would supplement the regular Head Start program by having paraprofessionals assist parents in providing intellectual stimulation for their children.

The researcher's role included: establishing criteria for selection of the paraprofessionals; preparing curriculum to be used in training the paraprofessionals; preparing curriculum to be used by the paraprofessional in working with the parent; selecting materials to be left in the home for the parents to use in teaching their children; selecting evaluative instruments to be used in assessing change in paraprofessionals, parents, and children; analyzing the data and reporting the results.

The methods and procedures that were used to implement the program were presented by narrative, graphic, and pictorial descriptions. Certain measurements were made on the children's progress in developing desired skills. The results of these evaluative procedures were described statistically.

Certain personal and social variables, such as sex, family structure number of siblings, or position in family, did not have a significant relationship with the children's performance on measures of learning skills. There were, however, other factors, such as education of the mothers, education of the fathers, and place of residence which correlated positively with the children's performance.

12. Grindheim, Rose Voetmann. A Comparative Study of Head Start Programs. University of Missouri--Columbia, 1970. 155p. Adviser: James L. Craigmire. 71-8330.

Purpose: To evaluate the results and effectiveness of a task oriented Head Start program and to compare it with similar children who had a traditional nursery type Head Start program and children who did not have Head Start.

Method of Research: The experimental group consisted of Head Start children in the Columbia, Missouri, 1969 task oriented Head Start program. Control groups were those children in the 1968 Columbia,

Missouri, 1968 traditional nursery type program and a similar group which did not have Head Start experience. All children had been in the Columbia kindergarten program prior to entering Head Start. A parent opinion survey sought to evaluate parent opinion of Teachers, Importance of Education and Curriculum.

Findings: (1) The comparison of the three groups on the Metropolitan Achievement Test, Primary I Battery, resulted in no differences.

(2) The comparison of 1968 and 1969 Head Start parents on the parent opinion survey "Importance of Education" resulted in a *t* value which was significant. The evidence suggests that the 1969 Head Start parents had more positive attitudes regarding "Importance of Education."

Conclusions: (1) Generally the two instructional approaches under these conditions produce similar results.

(2) Generally, the structured approach combined with emphasis on parental education and involvement improves parents' opinion of "Importance of Education."

Recommendations: (1) Further study needs to be done to see which students make the greatest gains, which types of teachers seem most effective, which curriculum models continue to show initial gains, and what other gains are made which conventional tests do not measure.

(2) Further study needs to be done to see what part parent involvement plays in compensatory education.

13. Jacobs, Sylvia Helen. Parent Involvement in Project Head Start. The University of Texas at Austin, 1970. 106p. Adviser: Carl Hereford. 70-18,256.

The purpose of the study was to assess the impact of Project Head Start upon the parents of children who participated in a six-month Head Start intervention program in Austin, Texas. The sample was comprised of 57 Negro and 51 Latin-American parents.

From the Parent Interview, which was administered to the female caretaker (usually the mother) of each child enrolled in the Head Start program both before and after the intervention had taken place, scales were constructed to measure the level of general optimism reported by each parent, and the aspiration level for the participating child reported by each parent.

It was hypothesized that prior parental experience with Project Head Start, current parental experience with the program, and active parental participation in the program would increase parental scores on the two scales. None of these hypotheses was confirmed.

It was further predicted that children of parents who showed favorable changes on a scale would gain more from their own Head Start experiences, in terms of changes in the scores on the tests administered to them both before and after the program, than children of parents who showed unfavorable changes on that scale. This prediction was not confirmed.

It was also hypothesized that Latin-American parents would show more

favorable change on the scales than Negro parents; this hypothesis was not confirmed.

Although the results of this study were negative, an inspection of the data reveals a possible trend which might be investigated more thoroughly in a separate study. It may be that higher scale scores, indicating more positive responses in the areas under investigation, precede rather than result from performance. Performance, in this study, refers to active parental participation in the Head Start program, and to scores obtained by the children on the instruments administered to them.

It was suggested that in future research, instruments be constructed to assess more adequately some of the factors with which this study was concerned.

14. Payne, James Simeon. An Investigation of the Effect of a Training Program Designed to Teach Parents How to Teach Their Own Head Start Children. University of Kansas, 1970. 210p. 71-13,400.

Intervention programs for culturally disadvantaged preschool children have been established as a means to help children compensate for developmental deficits or prevent developmental deficits from occurring. Early intervention has usually been thought of in terms of preschool programs; however, recently the importance of parent involvement in the child's learning processes has led to the encouragement and initiation of programs for parents of culturally disadvantaged preschool children. This study investigated the effectiveness of a training program designed to teach parents how to teach their own children.

The strategy for examining the effectiveness was to compare cognition scores and achievement scores between children served in Head Start whose parents did not have an opportunity to participate in a parent training program (Head Start group) with children served in Head Start whose parents participated in a parent training program (Head Start plus parent group).

The instruments used in the study were: (a) Stanford-Binet Intelligence Scale Form L-M; used as pre test only, (b) Peabody Picture Vocabulary Test; used as pre and post test, (c) Goodenough Draw-a-Man; used as pre and post test, (d) The Preschool Inventory; used as pre and post test, and (e) Wide Range Achievement Test; used as post test only.

An analysis of covariance simple classification technique was used to determine between the two groups using the relevant post test variable as the criterion and all pre test variables as covariates.

The study was conducted over a five month period and data were collected on 117 subjects. During the study two sub groups developed out of the originally planned Head Start plus parent group; the two groups were classified as non cooperative and working mother groups. The data were organized and analyzed into two main headings: (a) comparing Head Start group with Head Start plus parent group and (b) comparing four groups--Head Start, Head Start plus parent, non cooperative, and working mother.

When the data were analyzed comparing the Head Start group with the Head Start plus parent group, the two groups were not found to differ on cognition as measured by the Peabody Picture Vocabulary Test and the Goodenough Draw-a-Man Test nor on achievement as measured by The Preschool Inventory or Wide Range Achievement Test.

When the four groups were compared using the same statistical technique, criterions, and covariates as above, no significant differences were found among the groups on any of the criterion variables.

Various unanticipated problems were encountered during the study that possibly negatively affected the results; therefore, a post hoc analysis of the data was conducted to determine the effectiveness of the various groups using a pre post paradigm. A correlated 't' test was applied to the pre and post test data on the Peabody Picture Vocabulary Test, Goodenough Draw-a-Man, and The Preschool Inventory. On the Peabody Picture Vocabulary Test significant gains at the .01 level were found on the Head Start; Head Start plus parent; Head Start plus parent, non cooperative, and working mother; and total groups. Also, the non cooperative group showed significant gains on the Peabody Picture Vocabulary Test at the .05 level. No gains were found with any group on the Draw-a-Man. On The Preschool Inventory significant gains at the .01 level were found on all groups except the working mother group and that group showed gains at the .05 level.

Conclusion. Parents involved in a program designed to teach them how to teach their own children did not produce significant changes in children's cognition or achievement levels. This conclusion should be viewed in relation to the limitations mentioned in the dissertation.

15. Terry, Gwenith Land. Parent Participation in Decision Making in Year Round Head Start as a Predictor of Reading Readiness. The Florida State University, 1970. 86p. Adviser: Nancy Douglas. 71-7115.

The major purpose of this research was to examine the relationship between parents' patterns of, and opportunities for, participation in the decision making process in Head Start, and reading readiness of their children. Information on parent participation was used to answer two principal questions: (1) Is the level at which the parent participates in the decision-making process in Project Head Start related to the reading readiness score of his child? (2) Is there a difference in reading readiness scores of children who are enrolled in Head Start Programs in a county judged to be high in parent participation in decision making opportunities and those attending programs in a county judged to be low in parent decision making opportunities?

The data were collected in the winter of 1970, from a sample of 200 Head Start children and 50 of their parents. The sample was drawn from both rural and urban areas of two counties in Central North Carolina. County I was identified as low in parent participation in decision making opportunities, and County II represented high opportunities for such participation. These designations of high and low

counties were made by the Head Start Regional Training Officer for the state.

An Index of Parent Participation in Decision Making which was developed by the researcher was administered to a random sample of 25 parents in each county. Method of data collection was through personal interview in each subjects' home. Reading readiness data were furnished by county school personnel on 100 children in each county.

The chi-square median test was employed in the investigation of differences in the distribution of high, moderate, and low participation in decision making scores of parents and high and low reading readiness scores of their children. Significant differences were not found at the .05 confidence level. However, a trend was established in favor of higher reading readiness scores when parent participation was higher with a $P>20<30$. Inspection of the distribution of scores between County I and County II revealed that higher scores were predominantly found in County II. This finding was consistent with the judgment of the regional training officer in designating County II as high in decision making opportunities.

In an effort to locate prime sources of differences which were found between the two counties, comparisons were made on responses to individual and grouped items on the questionnaire. County II consistently exceeded County I in percentage of affirmative answers.

The Mann Whitney U was utilized to investigate the differences between reading readiness scores of children in County I (low in parent participation) and County II (high in parent participation). Significant differences exceeding the .001 level were found with County II having the higher scores.

In summary, the measurement of parent participation was found to be moderately predictive of readiness scores of children. Additionally, higher parent participation scores were predominantly in County II as were significantly higher readiness scores.

Although the Index of Parent Participation in Decision Making proved to be a useful instrument in this study, the future researcher must look for refinements of this index or other means of measuring parent participation in decision making. Control of other variables outside the scope of this study could lead to clarification of the relationship between parent participation in decision making and the child's reading readiness. Research efforts should be continued in pursuance of more productive approaches to studying parent participation in the decision making process.

16. Brown, L. Wayne. A Study of Head Start Parent Participation Activities in the United States in Cities with Population Between 100,000 and 200,000. Michigan State University, 1971. 156p. 71-31,165.

Head Start parent involvement policy stipulates parent programs must provide four major types of parent activities to strengthen the ability of parents to give more positive support to the growth and development of their children.

The purpose of this study was to determine if Directors in Head Start programs are complying with the Head Start parent participation policy, and if the preparation and prior experience of the Director, the person to whom he is responsible, the number of years teachers have taught in Head Start classrooms and the location of the classrooms influence compliance with the Head Start parent participation policy of non-preferential emphasis on the four types of parent participation activities.

Ten selected Educational Authorities were polled by questionnaire to ascertain if they supported the Head Start parent program policy. Nine responded.

Directors of Head Start programs in the eighty-seven United States cities with population between 100,000 and 200,000 were selected to participate.

Data were collected by a specially constructed questionnaire consisting of two parts designed to gather information about current parent participation activities and five selected demographic characteristics of each Head Start program. These characteristics became the basis for six hypotheses tested in this study. Seventy-one per cent of the questionnaires were returned.

The Friedman Two-Way Analysis of Variance by Ranks Test was applied to all data, with level of significance at .05.

Conclusions:

1. As a group nine, Educational Authorities confirm the need for Head Start parent programs to provide the four types of parent activities as stated in Head Start, A Manual of Policies and Instructions. This policy indicates the need for non-preferential emphasis on the four types of parent participation activities.

2. All Seventy-one per cent of the Directors responding provided some degree of parent involvement in all four types of parent activities, but with consistently preferential emphasis.

3. Directors with preparation and prior experience in elementary education emphasize the Classroom Involvement type of activity as characterized by the descriptive statements on the original questionnaire:

Parents assisting in the classroom as volunteers on a scheduled basis

Parents being invited to planned classroom activities

Parents accompanying class on field trips

Parents being provided baby sitting services while visiting in classroom

Parents assisting in serving food and eating meal with class

4. Directors with preparation and prior experience other than elementary education emphasize the Administrative type of activity as characterized by the descriptive statements on the original questionnaire:

Parents being systematically asked to give ideas for program improvement

Parents actively securing volunteer services for program

Parents helping recruit and screen employees

Parents visiting other programs to gain ideas for local improvement

Parents assisting in the evaluation of the total program

5. Staff-Parent-Child Relationship is the type of parent activity consistently given the least emphasis. This type of activity is characterized by the descriptive statements on the original questionnaire:

Parents being allowed to check out toys/games for home use with child

Parents receiving reinforcement materials to be completed with child at home

Parents learning how to read and tell stories to child for fun

Parents receiving suggestions of specific TV programs to view with child

Parents being encouraged to attend with child certain community events.

6. In this study, only the Directors' background appears to influence whether activities concerned with the administration of the program or activities concerned with the instructional aspect of the program are given priority of emphasis.

17. Carson, Joan Carol. The Status of School-Preparatory Activities by Parents of Children from Disadvantaged Homes and the Development of a Series of Booklets of Suggested Preschool Activities for These Children. The University of Mississippi, 1971. 202p. Adviser: Professor R. W. Plants. 72-3918.

The purposes of this study were to (1) assess the extent of the disadvantaged child's achievement motivation, language development and general learning as perceived by the teachers and public health workers polled in this study, and (2) compile a repertoire of activities and desirable attitudes into an easy-to-read illustrated series of booklets aimed specifically at the parents of the disadvantaged child.

The materials reviewed for this study were publications of educational and governmental agencies, publications of commercial and other organizations, books, and journal articles. The literature review indicated that suggested activities and recommended procedures focused on the main areas of health care, language development, perceptual-motor development, quantitative developmental and social development. The area of health care received the widest emphasis and the area of quantitative development received the least emphasis. There was agreement among the publications as to what experiences a disadvantaged child needs to insure an adequate preschool preparation. No governmental, commercial or private organization publications were found which were aimed specifically at the parents of the preschool disadvantaged child on the subject of the preparation of the child for school.

A questionnaire was written in terms of the five areas identified in the literature so as to provide information that would constitute a basis for booklets. To secure this information, the questionnaire

was administered to 80 Head Start teachers, 22 first grade teachers and 15 public health workers within schools. Head Start centers, and health facilities in Lafayette and Marshall Counties in Northern Mississippi.

A weighted mean was computed on the data to determine the amount of emphasis that the material within the booklets received. There was agreement among the respondents as to what behaviors a disadvantaged child is capable of performing. While the direction of the weighted means was the same across groups, the magnitude of the weighted means was the highest for the Head Start group.

All booklets were written using a third to fourth grade vocabulary as it was believed that many parents of the disadvantaged cannot read at the average adult level. Each booklet was kept to between 20 and 30 pages in length. The booklets were illustrated to promote interest in the material and to help show recommended procedures.

The booklet on language development dealt with listening, reading, answering questions, visiting and exploring new places, use of the library, television watching, and listening to music. The booklet on social development dealt with group play and work, sharing, pretending and exploring, the development through role-playing of a positive self-concept, and proper manners. The booklet on health care was a basic collection of proper health and nutritive practices. The booklet on quantitative development dealt generally with recognition of pennies and nickels, learning about the days of the week, counting, and recognition of geometric shapes. The perceptual-motor booklet dealt with play and exercise, drawing, scribbling, cutting and pasting activities, learning of colors, shapes, sizes, weights, and directions, and listening to music. The sixth booklet, a general booklet, was written to summarize some of the vital suggestions included within the five area booklets, to include some obvious suggestions and recommended activities that were not included in the area booklets, and to include general but important preschool preparatory activities that were not directly related to the five main areas.

18. Lewis, Cornell Theodore. A Study of Various Factors in Head Start and Title I Programs in Twenty School Districts. University of Massachusetts, 1971. 175p. Adviser: Dr. Arthur W. Eve. 71-17,701.

This study was undertaken to investigate various aspects of public school programs, presently using Title I funds, to determine what changes have evolved due to the operation of Head Start. The major purposes of the study were to examine: (1) the organizational changes taking place, as a direct result of Head Start, within schools receiving Title I funds; (2) the working relationship between the Head Start staff and appropriate Title I personnel receiving Head Start pupils; (3) the extent of parent involvement in regular public schools as a continuation of parent involvement initiated in Head Start; and (4) various factors of the Head Start program with similar factors of the Title I program in twenty school districts.

The survey method of research utilizing the questionnaire-interview technique was used to collect data for analysis. Personal interviews were held with sixty persons from twenty school districts. The interviewees included directors of Title I and Head Start projects in addition to parents of children who had participated in both projects. Data were extracted from the sixty usable survey instruments and recorded on IBM punch cards for tabulation. The status of these projects was presented from the results in a descriptive analysis.

Summary of Findings and Recommendations:

1. The data supported the fact that there were some marked educational changes within the school districts under study which were closely associated with activities initiated by Project Head Start. For example, the creation and involvement of parents on Policy Advisory Boards; the provision of free lunches for children and parents; the participation of parents in the selection of staff; and the utilization of paid and nonpaid classroom volunteers from neighborhoods serviced by the projects were an integrated part of all school districts under study. Head Start's involvement was slightly higher, however, it is noteworthy to point out that the above activities are mandated by federal guidelines developed for Head Start projects, but not for Title I, which is funded under a different federal act. Title I projects seem to be adopting many features of Head Start's guidelines voluntarily. The researcher believes that since Head Start and Title I were designed to serve the same purpose and often the same general population, the guidelines should be uniform.

It is therefore recommended that the U.S. Department of Health, Education, and Welfare should develop a single set of guidelines and move to adopt these guidelines for both federal projects.

2. Considering the evidence revealed by previous research and findings from this study, there is an inconsistency of children who enroll in public schools for the first time.

It is therefore recommended that federal lawmakers pass legislation and/or strongly urge states to make early entrance mandatory. Further the writer recommends that federal assistance be given to all communities needing help in establishing Kindergarten programs, thereby providing funds for initial implementation.

3. The data in this study revealed that parent participation played a significant role in bridging the gap between school and community residents. Evidence indicated that parents had a definite impact on changes found in the districts under study. To fully develop this alliance between parents, community residents, and educators, the writer recommends that: (a) pilot studies be carefully designed to determine the degree of parent and community involvement and explore ways of effecting such an involvement; (b) funds from projects such as Head Start, Title I, Model Cities, and Follow Through should be designated for parent and community participation before approval is granted.

4. Further, the data revealed that Title I was not as consistent as Head Start in its nutrition program component. Since children are from basically the same families and/or communities, it seems that

similar needs should exist. Therefore, it is recommended that local officials study carefully this apparent discrepancy and make provision to coordinate this vital program component.

19. Norman, Guinevere Guy. Educational Expectations and Problems as Perceived by Head Start Parents and Teachers. University of Southern California, 1971. 147p. Adviser: Professor O'Neill. 71-16,430.

Head Start is an educational innovation designed to help the disadvantaged preschool child. The program is under the auspices of the Health, Education and Welfare Department, which allocates funds and offers services to school districts for educational improvement. The Pomona Head Start Project has as its basic purpose the improvement of the educational attainment of the deprived preschool child. It is axiomatic that parents and teachers have some effect on the Head Start child but no studies which tended to clarify what the educational expectations of parents and teachers were could be located. There were two major purposes to this study: (1) to determine what Head Start parents and teachers expected each other to teach the preschool child; and (2) to determine what Head Start parents and teachers see as their major problem in relation to the Head Start program.

The research population consisted of 75 parents, 10 Head Start teachers, 7 Assistant Head Start teachers, 2 each of social workers, registered nurses, and administrators.

The experimental design and methodology embodied the use of primary and secondary sources; computer processes; and field study methods. To implement the study a questionnaire was developed for use with English and Spanish speaking respondents. Questionnaires were divided into "parents" and "professionals," with the latter further divided into teaching and nonteaching staff. Answers were coded and placed in one of these categories: "School Adjustment," "Body Care," "Curriculum Emphases," "No Problem," or "Problem." The categories were developed from the answers of the participants. In addition to computer treatment the results were inculcated into a numerical chart which permits quick comparison of the answers from the various respondents.

Hypothesis 1 was that there would be no differences in school adjustment, body care, and curriculum expectations of Head Start parents and teachers. Chi square values indicated that there were no differences at a significant level: therefore Hypothesis 1 was accepted. Hypothesis 2 was that there would be no differences in the degree of recognition by Head Start parents and teachers that both groups have problems connected with the program. Chi square results showed these differences to be significant, so Hypothesis 2 was rejected.

The findings are embodied within the concept of communication, and the changing roles of Head Start parents and teachers. (1) There was an acceptance by both Head Start parents and teachers of the increasing parental role of the teachers. (2) Parents did not see the teaching

of subjects as part of their responsibility. (3) Teachers listed social adjustment as the first educational expectation for themselves. (4) Body care, inclusive of safety, was given least attention by respondents. (5) Head Start professionals cited the need for an administrative assistant to the director. (6) Parents were concerned with problems of transportation and isolation. (7) Both parents and teachers noted the need for more counseling services.

Recommendations: (1) Help parents to realize that certain areas of informal education are also a part of parental responsibility. (2) Improve teaching skills by offering courses focused on subgroups within minorities. (3) Develop a community transportation plan for Head Start participants. (4) Utilize the services of consultants to help with special problems. (5) Secure the services of an administrative assistant trained in ethnic relations and community organization particularly suited for deprived areas.

Head Start Programs--

Teachers and Paraprofessionals

20. Levy, Alan William. The Effects of Teacher Behavior on the Language Development of Head Start Children. Case Western Reserve University, 1968. 179p. 70-5032.

The present study was concerned with the effects of specified dimensions of teacher behavior on the language development of socially disadvantaged preschool children enrolled in Head Start. It was hypothesized that teachers who showed high levels of competence in eliciting verbal behavior from their pupils and rewarding them appropriately, in providing a language model for children to observe and imitate, and in maintaining positive social-emotional relationships in the classroom, would facilitate greater language development in their pupils than would teachers who showed less competence in these areas.

Eighteen Head Start teachers were observed by pairs of trained non-professional assistants during their entire morning and afternoon class sessions and rated on three 10-item subscales of the Observational-Rating Instrument, constructed for this study. Each of the subscales--Response-Reinforcement, Modelling, and Social-Emotional--was designed to measure a specific parameter of teacher behavior which was hypothetically related to language growth in preschool children. The 18 teachers were arranged in rank order according to their rating scores; then the rankings were divided into three groups of six teachers each, designated as High, Middle, and Low teacher-behavior groups.

The dependent variable--language development--was quantified by five selected subtests of the Illinois Test of Psycholinguistic Abilities and an additive Composite Score. Tests were administered to 295 children who were enrolled in the 18 teachers' Head Start classes. Six months intervened between initial and final test administrations; the scores on the final round of testing served as the index of language growth.

An analysis of covariance statistical method was used to test the general hypothesis and to adjust for variations in uncontrolled, related factors such as initial language test scores. The specific-dimension hypotheses, measured by the separate subscales of the Observational-Rating Instrument, were not testable because of the virtually perfect intercorrelations which were obtained among the subscale ratings.

The findings provided confirmatory evidence for the general hypothesis. Significant differences among the three teacher-behavior groups were obtained on all language indices except the Auditory-Vocal Automatic subtest. The hypothesized relationship held up when the total sample was divided into Negro and Caucasian subsamples. The highest-rated teacher-behavior groups also had the highest language scores on the initial administration of tests. A subsequent analysis

substantiated the likelihood that effects of the more competent teachers were manifest even before the initial round of testing for children who had been in Head Start previously for a long period of time.

The implications of these findings with reference to limitations in sampling, interpretation of the high intercorrelations among subscale ratings, and other relevant issues raised by the research, were discussed. Suggestions for further study in this area were offered.

21. Lambert, Carroll Carman. Teacher and the Curriculum for Preschool Children in Head Start. Utah State University, 1969. 170p. Advisor: Dr. E. Malcolm Allred. 70-2441.

Children of the poor have been thought in the past to be incapable because of hereditary factors which served as barriers to achievement. However, there is a new conception of man's nature which holds that intelligence and the personal capacities of an individual are determined mostly by the nature of his life experiences. The Head Start child is characterized by lack of family income, an inadequate self-concept, language disability, perceptual deficiencies, a restricted fund of information, inadequate social skills, and a limited ability to accept deferred gratification. He has often been deprived of the growth-promoting experiences which would have enabled him to develop as favorably as his middle-class peers.

The office of Economic Opportunity has promoted Head Start as the agency through which it will help the preschool child, and his family, to overcome the effects of poverty. Head Start has developed the concept of the Child Development Center. The Center is a facility in that it houses the classroom and additional rooms for other purposes of the program. It is a concept in that it represents the idea that the resources of the community can be mobilized to serve all the needs of the children in the program.

The purpose of this study has been to develop an appropriate curriculum which would utilize the most effective approaches to helping the Head Start child benefit most fully from a program of compensatory education, designed to prepare him to function adequately when he enters school.

It must be recognized that there is more than one suitable method of teaching and educating young children. However, not all approaches to educating the young child are equally effective. There are at least three different roles for the teacher which have been utilized in an attempt to meet this need. The teacher-planned approach has been the basic orientation of most preschool programs in the past. This method has relied heavily on intrinsic motivation and the structuring of materials and equipment to facilitate learning. The teacher-directed approach has placed greater emphasis on utilization of more structured and formal learning methods, including the use of teaching machines, drills, and rejection of play as an acceptable method of teaching. The teacher-involved approach is one in which the teacher

is actively involved in helping the child extend his knowledge and make it more meaningful and real to him. This method relies more heavily than the others on providing the child with a wide variety of sensory experiences to reinforce each other, and calls for active involvement on the part of the teacher to provide simultaneous visual, tactile, and verbal experiences as the means by which cognitive development can most effectively be accomplished.

The curriculum is based on the utilization of activities which are related and can reinforce each other. However, the activities should be seen as means, rather than as ends in themselves. They should contribute to planned objectives, rather than being used as an activity for its own sake. Therefore, it is essential that the curriculum be based on specific goals to be achieved in the areas of self-image, language, cognitive, social, and motor development.

22. White, Alice Bernice Bradley. An Attitudinal Comparison of Primary Teachers with Head Start Workers and the Primary Teachers' Comparison of Head Start with Non-Head Start Children. University of Southern Mississippi, 1969. 132p. 70-9762.

This study was undertaken to find out how the first and second-grade teachers, who taught both Head Start and non-Head Start children, comparatively judged the abilities and other characteristics of the two groups of children. It also compared the responses of the first and second-grade teachers in the study with the responses of non-professional Head Start workers in the area of the promotion of mental health and in their attitudes as to the causes of children's behavior.

The teachers were 27 first and second-grade Negro teachers of Lamar, Marion, and Walthall counties in Mississippi. Thirty-five Head Start Workers were used from the same area, who had taught the Head Start children comparatively judged by the teachers. These non-professional workers had participated in intensive pre-service and in-service training, and had worked under close professional supervision.

Three instruments developed by the senior staff members of the Personnel Services Research Center at the University of Texas were used for the collection of data for the investigation. These were Teachers' Survey Form, Dimensions of Teachers' Opinions, and Child Attitudes Survey. Since this was an exploratory field study, no hypotheses were formulated. Tabular representations were made of the data collected by Teachers' Survey Form. Emergent factors on the other two forms were used as sub-scales, and analysis of variance was performed for analization of the data, using the F test of significance.

The data collected by Teachers' Survey Form left no doubt that the Head Start children were perceived as being superior in development to their non-Head Start classmates from similar environments. On one item, "Readiness for School," eighty-one percent of the teachers perceived Head Start children as being superior to non-Head Start children from similar environments.

Analyses of variance performed on the data collected by Dimensions

of Teachers' Opinions and Child Attitudes Survey indicated that there was a significant difference in attitude between the first and second-grade teachers and the non-professional Head Start workers on all six emergent factors from the two instruments. The analyses revealed that the teachers were less authoritarian in their orientation to children and had more informed mental health concepts than the Head Start workers. On the other hand, the analyses revealed that the Head Start workers had more sophisticated attitudes toward management of child behavior and were more oriented toward direct efforts to help children, rather than ignoring them, than were the primary teachers. The analyses further revealed that the Head Start workers subscribed more strongly to environmental control and hereditary causation of child behavior than did the primary teachers.

Four of the conclusions drawn from these data were:

1. In the opinion of the first and second-grade teachers of this group of children, the Head Start program had made a positive contribution to the development of the children, particularly in school readiness.
 2. If the Head Start children were, in truth, superior to their non-Head Start counterparts in readiness for school, as they were judged by their primary teachers, non-professional personnel can be used to contribute to the development of school readiness in preschool children.
 3. With pre-service and in-service training non-professional personnel can develop sophisticated attitudes toward the management of child behavior and can become oriented toward direct efforts to help children, rather than ignoring them.
 4. Training and supervision are crucial in the development and use of non-professional personnel in pre-school programs.
23. Bogan, Margaret N. Curriculum Priorities for Head Start Supplementary Training. Arizona State University, 1970. 136p. Adviser: Mack A. Ralston. 70-21,950.

The central purpose of this study was to formulate a curriculum-instruction model to implement future program development for the Arizona Head Start Supplementary Training program. The history and present status of the program were described in some detail; for it was from experiences in coordinating this program that the model-building evolved. Included in this descriptive material were the characteristics of the population concerned, the objectives of the program, and unique curriculum and instruction problems which led to the study.

A review of the literature analyzed material relevant to curriculum-instruction theory, the selection of content and instructional strategies for adult higher education, and the psychology of adult learning. The references were selected to identify curriculum-instruction priorities applicable to the Arizona Supplementary Training program and to substantiate the philosophical, theoretical, and practical

positions supporting the model.

The model was formulated by combining the analysis of the literature with the program characteristics. The result was a semantic model which established priorities for selecting content and instructional strategies for Supplementary Training program development.

The philosophical basis for selection of content was Phenix' "realms of meaning"; for it provided a comprehensive definition of organized knowledge, a recognition of both substantive and process areas of knowledge, and an adaptability to the goals of the program, of the pupils, and of society. Within this context, decisions regarding specific subject matter selection were dependent upon the representative character of the subject matter, its significance to pupil and program, its accessibility or communicability to the student, its breadth and scope, its capacity for organizing and relating, and its capacity for further development.

Instructional priorities began with the recognition of the importance of personal interaction in the learning experience. More than the usual amount of attention should be given to selection of a flexible creative instructor who is aware of and responsive to the unique character of his student population. Instructional materials need to be evaluated according to relevance to students, content, and program, variety in presentation and significance, and imaginative appeal and development.

A final consideration was the recognition of the problems related to the evaluation of students. New procedures, taking advantage of the opportunities for measuring appropriate behavioral changes, were outlined.

A secondary purpose of the study was to validate the model. Validation procedures included a description of the application of the model priorities to the designing of a course in teaching English as a second language to Navajo pre-schoolers. This course, requested by teachers and aides in the Tuba City Head Start program, was selected as a test situation.

Since the major objective of the course was to increase the effectiveness of the teachers and aides in teaching English to Navajo children, the evaluation was based on the observation of behavioral change. The changes sought were changes in the behavior of the teachers and aides and were categorized as learner behaviors and learner products appropriate to the course objectives outlined by the instructor. The instrument used was developed according to criteria suggested by Southwest Regional Laboratories.

Interviews of the Tuba City participants and of the original Arizona Supplementary Training enrollees added data which supported the use of the model as a guide for program development.

One set of conclusions was drawn from the literature and concerned the rationale and formulation of the model. A conceptual model can be formulated by stating the interrelationships among these referents: the needs and goals of the individual, society, and the teacher, and organized knowledge and how it is to be taught.

Results of the observations and interviews indicated that courses designed according to model priorities appeared successful in achieving the desired behavioral changes and in motivating participants to continue their education.

Suggestions for future research were designed to further the use of the model. Experimental testing should be applied to a variety of courses and related programs to determine the extent of behavioral change achieved by course work. Another profitable area for research suggested by the interview data would be the extent of educational attitude change experienced by Supplementary Training participants.

24. Seefeldt, Carol Ann. Teacher Training, Experience, and Education in Relation to Head Start Pupil Achievement. The Florida State University, 1971. 98p. Adviser: Nancy J. Douglas. 72-13,562.

Currently there are over 200,000 paraprofessionals teaching in the Head Start program. These persons are not required to possess formal education, specific training, or experience for their positions as teachers. The purpose of this study was to examine the relationship between the teacher characteristics of formal education, previous teaching experience, and amount of in-service training completed by the teacher, and the achievement of Head Start pupils as measured by the Bettye Caldwell Preschool Inventory.

The teachers of children of the Duval County, Florida, Head Start program were the subjects of this study. Thirty-one teachers, and 357 children comprised the final sample. The Bettye Caldwell Preschool Inventory was administered on a pre-post paradigm to the Head Start children. This testing provided the measure of achievement for the dependent variable. Multiple linear regression techniques were utilized to examine the relationship between the teacher characteristics of education, experience, and training, and the achievement of the pupils. The effects of sex, age of the child, and pretest scores were controlled by means of covariance of analysis. Independent variables were race, age, and formal education of the teacher; number of years of previous preschool, Head Start, and elementary teaching experience; the training activities of quarter hours of supplementary training, hours of in-service training, and completion of an eight-week Leadership Development Program; and number of children the teacher had of her own. Centers were coded, and this code was entered into the regression equation as a dummy variable in order to control for center differences. A significant F at the .05 level, plus a positive regression coefficient observed from the univariate regression equation, led to rejection of the null hypotheses.

The first null hypothesis, which dealt with the relationship between the number of years of formal education completed by the teacher, and the total achievement of the children was rejected. It was observed that the greater the number of years of formal education completed by the teacher, the larger the achievement of the Head Start children. The second hypothesis, which examined the relationship between Head Start pupil achievement and number of years of teaching experience

of the teacher, was also rejected. It was found that the larger the number of years of previous general teaching experience of the teacher, the greater the achievement of the Head Start children. The third null hypothesis was concerned with the relationship between the amount of in-service training activities completed by the teacher, and the achievement of the pupils. This hypothesis was rejected as a significant and positive relationship between the amount of training activities completed by the teacher and the achievement of the children was observed. Additionally, the race, age, and number of children the teacher had of her own, were examined in relation to pupil achievement. Race of the teacher was not related to pupil achievement. Age of the teacher was significantly and positively related to pupil achievement, and the number of children of the teacher was significantly, but negatively, related to pupil achievement.

The results of this study appear to indicate that the more formal education, prior teaching experience, and training completed by the teacher, the greater the pupil achievement in a Head Start program in Duval County, Florida. This finding would suggest that teachers of Head Start children, in order to be effective in fostering their achievement, should possess certain qualifications of formal education, training, and experience.

It is recommended that this study be replicated using a larger population, and in other geographical locations. Furthermore, a designed, controlled study is recommended in order to control the many variables influencing the achievement of young children not accounted for in this study. The combination of teacher training, experience, and education that are most effective in fostering preschool pupil achievement should be investigated.

25. Young, James Clayton. A Regional Investigation of the Effective Utilization of Teacher Aides in Head Start Centers. University of Massachusetts, 1971. 180p. Adviser: Dr. Daniel C. Jordan. 71-25,435.

Head Start was organized as one of the programs to help win the war on poverty. It is a comprehensive program for the purpose of increasing opportunities for children of the poor by providing an environment in which each child has the opportunity to develop his full potential. The total program is composed of several components aimed at delivering numerous services to low income families and their children. This investigation was limited to the education component.

An investigation was designed to assess the extent to which teacher aides were being effectively utilized in Head Start centers. As such, the study was conducted in Head Start programs throughout the New England states--Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, and up-state New York. No programs from cities exceeding the population of 200,000 were included in the sample.

The role of the teacher aide has never been clearly defined; however, Head Start, philosophically, believes there should not be a recognizable difference between the role of teacher and teacher aide in the

classroom. The major aspects of the teacher's role in the classroom include (1) Classroom Management; (2) Curriculum Development; (3) Preparing the Daily Schedule; (4) Utilization of Equipment and Materials; (5) Organization of the Classroom and (6) Classroom Discipline. For the most part, teacher aides should be involved in all levels of classroom responsibilities.

A five component questionnaire was tailored to elicit certain data from the population participating in the study. Those components were as follows: personal data, Head Start related training, classroom responsibilities, career development and a series of open ended questions. The population for the study was comprised of 110 Head Start directors, 400 teachers and 400 teacher aides from the above states. Questionnaires were distributed and returned via the United States mail. The SPSS--Statistical Package for Social Sciences--computer program was used to analyze the data.

Head Start Programs--

Summer Programs

26. Butts, David Stuart. A Psycho-Sociological Comparison of Project Head Start Participating and Nonparticipating Culturally Deprived and Non Culturally Deprived First Graders in Durhan, North Carolina. University of North Carolina at Chapel Hill, 1969. 257p.
Adviser: Donald G. Tarbet. 70-3208.

The purposes of this study were to determine if significant differences were observed for children who participated in the summer 1967 Head Start program and the culturally deprived non Head Start children in the areas of intellectual ability, achievement, creativity, and social growth and adjustment at the start of first grade; to compare both of these groups to the non culturally deprived children in first grade; to compare differences among all three groups on a follow-up diagnostic series of ratings near the end of the first grade; to determine the effect of father absence on child development; to determine what procedures best reveal child development in these groups; to determine the effect Head Start had on intellectual and social gains of the involved children; and to compare the home environment of each group.

The sample consisted of twenty first grade Head Start participant children; twenty first grade culturally deprived non Head Start participant children; and twenty first grade non culturally deprived children. The Index of Status Characteristics was applied to determine the degree of cultural deprivation.

Descriptive statistics, analysis of variance, and analysis of covariance were appropriately used to treat the data gathered from the following instruments: S. R. A. Test of General Ability, Columbia Mental Maturity Scale, Culture Fair Intelligence Test, Torrance Test of Creative Thinking, a Home Interview, Development of School Attitude and Adjustment Scale, Behavior Rating Scale, and a Curriculum Teacher Evaluation.

Results:

In relation to the children's environment, twice as many Non Culturally Deprived parents indicated that they wanted their child to continue into high education as did the Head Start group parents; the Non Culturally Deprived home had the fewest number of relatives and the greatest mean number of parents as well as the highest educational achievement and the most diverse educational materials. Mothers in all groups studied were found to have higher mean achievement in terms of education than the fathers.

For creativity scores, the Head Start groups scored higher in fluency and flexibility in the pre-test at the start of the first grade than the Culturally Deprived Non Head Start group but lower than all groups for these mean measures in the spring. For originality and elaborateness the Head Start group scored highest in mean score among the groups in fall as well as spring.

The result of the I.Q. tests in mean scores revealed that the Head Start group scored lowest and the Non Culturally Deprived group scored highest on these measures for both pre and post tests. It was also found that father absence implied a higher mean I.Q.

Attitudes were found to be more favorable in the Non Culturally Deprived and Head Start groups. Behavior was listed as least favorable in the Head Start group which was also listed as the most aggressive and demonstrating the least amount of leadership. The Culturally Deprived Non Head Start group was rated as the most withdrawn while the Non Culturally Deprived group was rated as the least aggressive and withdrawn, displayed the most leadership, and was the leader in curriculum achievement.

Even though there were no statistically significant results reported after the data were treated several practical tendencies existed: Children from these various group homes are exposed to different experiences that affect language and knowledge growth. Those children exposed to Head Start scored nearer the total mean of the three groups in I.Q. in the fall than they did in the spring, even though they were the lowest scoring group at both times. The Non Culturally Deprived groups scored highest at all times on the I.Q. measures. This study indicated that the "head start" did not continue and the Non Culturally Deprived group was at all time superior in mean intelligence and achievement but not in creativity.

27. Molloy, Edward Thomas. An Analysis of the Long-Range Effects of Head Start Summer Programs on Academic Achievement in Two Central Texas School Districts. Baylor University, 1969. 119p. Adviser: T. W. Rigby. 69-13,482.

The purpose of this study was to compare the long-range academic achievement of two groups of disadvantaged children in two central Texas school districts. One of the groups consisted of pupils who participated in a 1965 Head Start summer program. The other group was composed of children who were eligible to attend a 1965 Head Start program but did not participate. The study further attempted to determine significant academic achievement differences within ethnic subgroups. A substudy on scholastic readiness and one on retention rates were included since these measures relate to academic achievement.

The children studied in this research were 584 disadvantaged pupils who had been eligible to attend the 1965 Head Start summer program of the La Vega or Waco Independent School District in McLennan County, Texas. Of the sample population, 411 pupils had attended a Head Start program and 173 had not participated in any formal preschool program. Both major groups included children from three ethnic subgroups; Negro, Mexican-American, and Anglo-American.

The research design for the evaluation of pupil performance included the testing of the pupils with four standardized instruments. The Metropolitan Readiness Tests and the California Short-Form Test of

Mental Maturity were administered to all of the pupils. Third-grade pupils in the La Vega district schools were tested for academic achievement with the Metropolitan Achievement Tests, Elementary Battery. Third-grade pupils in the Waco district schools were tested with the Stanford Achievement Test, Primary II Battery. Test results and other relevant information were obtained from the school records of each pupil and recorded on a punched card for computer processing. Three hypotheses were formulated and investigated through the use of suitably selected statistical techniques.

Findings: The group of children who had attended the Head Start summer programs scored significantly higher than the matched group without formal preschool training in all readiness areas measured, and in total scholastic readiness. Significant relationships were also found between scholastic readiness and such variables as IQ and ethnic group membership.

The percentages of pupils who were retained in grades one and two were lower among the group of children who attended the Head Start programs. Thirty-one per cent of the pupils who did not participate in the Head Start programs were retained, compared to twenty-three per cent of the pupils who had attended the programs. The difference in these propositions was not statistically significant. Further analysis of the data revealed that there was a significant correlation between scholastic readiness and the retention rate; the lower a pupil's total readiness score, the greater the probability that the pupil would be retained in grade one or two.

Mexican-American pupils within both major groups experienced a higher retention rate than pupils from the other two ethnic subgroups. The Anglo-American pupils had the lowest retention rate. The differences in retention rates among the ethnic subgroups were not statistically significant.

Analysis of the scores of the two major groups on the Metropolitan Achievement Tests revealed no significant differences. Comparison of the Stanford Achievement Test battery scores indicated that the non-Head Start group scored significantly higher than the pupils who had attended the Head Start programs on three of the tests; paragraph meaning, spelling, and work skills. There was no significant difference between the scores of the two major groups on the other five Standard tests.

Further analysis of the achievement test scores indicated that ethnic group membership was a significant factor in the academic achievement of the pupils studied. The Negro pupils in both major groups scored lower than the pupils of the other two ethnic subgroups. The Anglo-American pupils generally scored the highest of the three ethnic subgroups.

Conclusions: Three major conclusions can be drawn from the above findings: (1) Attendance at a Head Start summer program significantly improved the scholastic readiness of disadvantaged children; (2) Children who participated in the Head Start programs were more able to make normal progress through the primary grades; (3) Attendance at a Head Start summer program made no significant difference in third-grade academic achievement of disadvantaged children as measured by standardized achievement tests.

28. Emanuel, Jane McIntosh. The Intelligence, Achievement, and Progress Scores of Children Who Attended Summer Head Start Programs in 1967, 1968, and 1969. University of Alabama, 1970. 171p. 71-9084.

The purposes of this study were: (1) to determine if any significant difference existed in the pretest and posttest intellectual maturity scores of the children who attended the 1969 Summer Head Start Program, (2) to determine if there was any significant difference in the intellectual maturity scores obtained at the end of the 1969 Summer Head Start Program and the intellectual maturity scores obtained after five months in Grade One for the same children, and (3) to determine if there was any significant difference in the intelligence scores, achievement scores, and progress scores of children who attended a Head Start Program in either the summer of 1967, 1968, or 1969, when compared with children who did not attend.

The data were collected during the 1969 Summer Head Start Program in Tuscaloosa, Alabama; and from Grades One, Two, and Three in two Negro elementary schools in Tuscaloosa, Alabama, during the 1969-1970 school year.

The instruments used in the study were the Goodenough-Harris Drawing Test, the Cattell Culture Fair Intelligence Test, the Stanford Achievement Test, and the Report to Parents of the Tuscaloosa City Schools.

The statistical significance of the data related to the 1969 Summer Head Start Program was determined by the t-test for correlated samples. The simple analysis of variance and the t-test for uncorrelated samples were used to determine the significance of the data collected during the 1969-1970 school year. The .05 level was used as the confidence level required for significance.

The major findings of this study were:

1. There was a statistically significant difference in the pretest and posttest intellectual maturity scores of the children who attended the 1969 Summer Head Start Program.
2. There was a statistically significant difference in the intellectual maturity scores obtained at the end of the 1969 Summer Head Start Program and those obtained at the end of five months in Grade One.
3. There was no significant difference in the intelligence scores of Head Start Attendees and Head Start Non-Attendees in Grade One.
4. There was a statistically significant difference in the intelligence scores of Head Start Attendees and Head Start Non-Attendees in Grade Two.
5. There was no significant difference in the intelligence scores of Head Start Attendees and Head Start Non-Attendees in Grade Three.
6. There was no significant difference in the reading achievement scores of Head Start Attendees and Head Start Non-Attendees.
7. There was no significant difference in the arithmetic achievement scores of Head Start Attendees and Head Start Non-Attendees in Grade One.
8. There was a significant difference in the arithmetic achievement scores of Head Start Attendees and Head Start Non-Attendees in Grade Two.

9. There was no significant difference in the arithmetic achievement scores of Head Start Attendees and Head Start Non-Attendees in Grade Three.
10. There was no significant difference in the reading progress grades of Head Start Attendees and Head Start Non-Attendees in Grade One.
11. There was a significant difference in the reading progress grades of Head Start Attendees and Head Start Non-Attendees in Grade Two.
12. There was no significant difference in the reading progress grades of Head Start Attendees and Head Start Non-Attendees in Grade Three.
13. There was no significant difference in the arithmetic progress grades of Head Start Attendees and Head Start Non-Attendees in Grade One.
14. There was a significant difference in the arithmetic progress grades of Head Start Attendees and Head Start Non-Attendees in Grade Two.
15. There was a significant difference in the arithmetic progress grades of Head Start Attendees and Head Start Non-Attendees in Grade Three.

[Pages 129-180, "Goodenough-Harris Drawing Test", "Test of "g": Culture Fair", and "Stanford Achievement Tests" not microfilmed at request of author. Available for consultation at University of Alabama Library]

29. Dellinger, Harry Vaughn. A Study of the Effectiveness of a Summer Head Start Program on the Achievement of First Grade Children. University of Southern Mississippi, 1971. 77p. 72-9068.

Is there a difference in the achievement of first grade children who attended an eight-week summer Head Start Program as compared to first grade children who were eligible but did not attend a Head Start Program? Areas of achievement were word knowledge, word analysis, reading, and arithmetic computation and concepts as measured by the Metropolitan Achievement Test, Primary I Battery. The Study also attempted to determine differences in readiness scores as measured by the Metropolitan Readiness Test.

The purpose of this study was to determine if significant differences in first grade achievement appeared between pupils having participated in a Summer Head Start Program and qualified pupils who did not participate.

The sample consisted of two groups: the experimental group with Head Start experiences and the control group without Head Start experiences. Both groups were further divided into three subgroups according to scores on the Draw-A-Man Test. Students in the high subgroup scored A, B, or C; middle subgroup scored D; and low subgroup scored E on the Draw-A-Man Test. Each subgroup consisted of seventeen students.

The Metropolitan Readiness Test was given to both groups during the first week of September, 1970. A two-way analysis of variance with high, middle and low subgroups based upon Draw-A-Man scores as one

factor and experimental and control as the other factor was performed. There was no significant differences in the two groups at the .05 level of confidence.

The Metropolitan Achievement Test, Primary I Battery, was given to both groups during the last week of April, 1971. A two-way analysis of variance with high, middle and low subgroups based upon Draw-A-Man scores as one factor and experimental and control as the other factor was performed. There was no significant difference in word knowledge, word analysis, and reading. There was a significant difference in arithmetic computation and concepts. The control group scored higher than the experimental group. The .05 level of confidence was used as a basis for the rejection of the hypotheses.

The conclusion was reached that the participation in the Summer Head Start Program had no positive influence on readiness and achievement at the first grade level for the students in this study.

30. Fischer, Lydia Helena. The Effects of Head Start Program, Summer 1965. The University of Wisconsin, 1971. 170p. Adviser: Professor Harold Wesley Watts. 71-14,138.

The rationale for Head Start and other educational and training programs sponsored by the Federal Government is that a redistribution of income can be achieved through more and better education of the poor. Given the magnitude of the resources allocated to Head Start and the hopes that have been placed upon it as an effective means of breaking the poverty cycle, it is imperative to determine the extent to which its goals have been achieved.

Most of the evaluations undertaken so far have studied the impact of Head Start on the child's cognitive skills. Although this thesis deals with the same topic, we hope its special contribution lies in two areas:

(1) in the appraisal of the Head Start summer program's educational and motivational effects, based on a sample of almost 70,000 first grade pupils, more than 10 per cent of whom had been Head Start participants. This sample was a segment of the survey of the public schools conducted in the fall of 1965 by the Office of Education.

(2) in the assessment of the power of ex-post facto statistical control techniques as a partial substitute for laboratory-type experimental control.

Our assumption was that the results of a direct contrast between the performance of participants and nonparticipants would be biased by non-random selection both of communities where Head Start operated and of children who participated in the program.

Accordingly, we found a linear combination of the characteristics of pupils and schools which discriminates between those communities which offered the program and those which did not. We verified that the communities were not similar in ways which are relevant when comparing the pupils' performances.

Next we used the same discriminant analysis to ferret out differences between participants and nonparticipants, our hypothesis being that participants were either recruited or self-selected from a population that had less than average school abilities.

Given the existence of significant differences between participating and nonparticipating communities, and between participating and nonparticipating pupils, we defined two variables for each pupil in our sample. The first variable has a value equal to the school's probability of offering Head Start score as determined from the discriminant analysis. The second variable is similarly derived from the participation probability. The final evaluation of the effects of Head Start--using a multiple linear regression model--was carried out using these variables to control for selection bias.

We estimated three different formulations of this model. A general formulation allowed us to detect positive and significant interactions between some of our demographic variables and Head Start attendance. We also split the sample into two groups according to race (black-nonblack) and estimated the regression coefficients for each subsample. Finally, the third model included the percentage of black pupils in the class interacting with every independent variable, such as age, sex, and Kindergarten attendance.

As gauged by the tests of general ability, our results indicate that Head Start is helping only children in schools with a high proportion of blacks. The same group of children also show an improvement attributable to the program in the areas of vocabulary and punctuality. Because of data limitations, no benefit-cost ratios were developed.

Our recommendation to the policy-maker is therefore to commit the available resources most heavily to programs functioning in the midst of predominantly black neighborhoods. However, we have not tried to evaluate the impact of Head Start in the areas of health and social development. Any final decision concerning future investment in the program would necessarily have to examine the program's performance in such areas.

31. Folis, Sara Gillespie. --A Review of the Organization of the Memphis and Shelby County Summer Project Head Start Operations, 1965-69.
The University of Tennessee, 1971. 185p. Adviser: Dr. John Ray.
72-15,519.

This study was concerned with the summer phase of Project Head Start, as authorized under the Economic Opportunity Act, 1964. The purpose of the program was to give the economically deprived child entering school for the first time an opportunity to be better prepared to succeed--a head start.

Head Start operated as part of the Economic Opportunity Office for four years and was then transferred to the Department of Health, Education, and Welfare. Locally the Head Start program was under the Community Action Committee and its successor, the War on Poverty Committee. These agencies delegated the authority to the Memphis and Shelby County School Boards. The school boards submitted applications for grants and operated the Head Start programs for the five years of the summer phase.

Head Start was a new venture in local education using federal funds.

Agencies other than school boards were to operate the programs. For Memphis and Shelby County school personnel it was a breakthrough in integration of staff. This study is limited to a review of the organizational structure in compliance with Federal guidelines for 1965-69.

Data sources used included the Head Start files of the Shelby County Board of Education; Bureau of Educational Research, Memphis State Regional Training; Memphis and Shelby County Health Department, Nursing Division; interviews; newspaper articles; and other published materials. The review of literature included books, newspaper files, magazine articles, and government documents.

Document study was the primary procedure used. Personal correspondence and interviews contributed to knowledge. Terms were defined as necessary.

This study was organized to present in detail the structure of the Memphis and Shelby County Project Head Start, 1965, and to select certain events which traced the historical developments within the five year program.

The following conclusions were reached:

1. Teachers could work in integrated situations.
2. All children did not participate in nonmandatory educational programs.
3. White children generally did not attend Head Start in urban ghetto areas.
4. Health services were needed.
5. The continuing interest of many volunteer workers was difficult to sustain.
6. Social service workers supplied needed services.

Recommendations:

Recommendations concerning the various phases of Head Start from the material presented in the chapters, and conclusions reached were that:

1. Curriculum for preschool children should be designed around field trip experiences, and the effectiveness of such a program should be tested.
2. Further study is needed to determine effective methods of enrolling children in preschool programs where attendance is not mandatory.
3. An attempt should be made to identify the personal and professional characteristics which enabled teachers and staff to work successfully in the integrated situations of Project Head Start.
4. Provision for comprehensive medical care for poverty children through age 17 should be made.
5. Methods of recruiting and keeping volunteers to assist in classrooms should be devised.
6. Study is needed to determine effective ways to involve poverty area parents in preschool programs.
7. A study of the effectiveness of each experimental program in relation to the cost should be part of each program initiated.

Head Start Programs--

Miscellaneous

32. Clark, Ann D. A Longitudinal Investigation of Selected Characteristics in an Economically Disadvantaged and Nondisadvantaged Headstart Population. The University of Wisconsin, 1969. 74p. Adviser: Professor James J. McCarthy. -69-22,363.

This study investigated auditory discrimination ability in economically disadvantaged and nondisadvantaged preschool children attending a short-term Headstart program. The experimental groups were studied in a longitudinal fashion over a three year period. Previous research has indicated a positive relationship between auditory discrimination ability and school success, and a need for further investigation at preschool levels, with socioeconomic status as an important variable.

Measurement of auditory discrimination ability was accomplished during four testing periods. Other factors considered included intelligence, socioeconomic status, age and sex. Hypotheses were formed that there would be no significant differences between two groups of disadvantaged and non-disadvantaged subjects in any of the four test periods.

Two groups of subjects, 12 preschool boys and girls in each, were selected from a population of 58 children attending a summer Headstart program, and subsequently completing three years of public school. One group was chosen from the economically disadvantaged, and the other from the nondisadvantaged.

The design of the study involved a four year longitudinal investigation with specified test periods for the evaluation of auditory discrimination ability, using the WEPMAN TEST OF AUDITORY DISCRIMINATION ABILITY (WTAD). Groups were equated on the basis of sex, chronological age, and intelligence as measured by the PEABODY PICTURE VOCABULARY TEST (PPVT).

Data were subjected to a multivariate analysis of variance, with additional analyses utilizing t-test and chi square. The findings indicated that the two groups were significantly different in favor of the non-disadvantaged group at initial or pre-testing, but that the differences between the two groups were not significant after a six-week Headstart program, and did not appear during subsequent testing periods covering a span of two and one-half years.

Thus this study provides evidence supporting a hypothesis of disadvantaged preschool children performing more poorly on a test of auditory discrimination ability when compared to nondisadvantaged peers, and provides support for preschool remediation and training. The results point to a need for confirming research with other types of disadvantaged groups, as well as the need for preschool training for disadvantaged children.

33. Curry, Dal Roy. The Effect of Two Types of Auditory Discrimination Training on Language Performance and Acquisition in a Culturally Deprived Preschool Population. University of Kansas, 1969. 108p. 70-11,011.

The training of auditory discrimination has been often recommended in the compensatory education of culturally deprived preschool children. Methods of training and their effect upon language functioning have not been investigated experimentally. The purpose of this study was to compare the effectiveness of two basic approaches to the training of auditory discrimination and to assess the effect of training upon language functioning and acquisition.

Forty-two culturally deprived preschool Negro children attending Project Head Start served as subjects for this study. Three groups, receptive training group, expressive training group, and control group were used. The subjects within the groups were matched on the basis of Stanford Binet (SB) IQ and Weppman Auditory Discrimination Test (WADT) scores. All subjects were pretested with the WADT, Peabody Picture Vocabulary Test (PPVT), Wechsler Preschool and Primary Scale of Intelligence vocabulary subtest (WPPSI) and the Cloze Test--an instrument adapted for this study from suggestions by Deutsch, Maliver, Cherry and Brown.

The training procedure for the receptive group consisted of the presentation of fifteen tape recorded lessons of sixteen one syllable word pairs similar to those found on the WADT. The subjects were instructed to indicate whether the two words presented were the same word or different words. Initially the words were quite dissimilar growing more alike in sound as the training progressed. The speed of lesson progression was controlled so as to maintain a high success level for each subject.

The training for the expressive group used the same tape recorded word pairs but the subjects were required to make an expressive response; repeating each word verbatim rather than simply indicating a receptive discrimination of the words. The same lesson progression was employed to insure approximately equal learning.

In order to control for familiarity with tape recorded material, the subjects in the control group spent equal time listening to recorded stories.

After approximately seven experimental sessions, all subjects were readministered the WADT to assess the short term effect of auditory discrimination training. All subjects were retested after the completion of the fifteen training sessions.

Following training, all subjects were retested with the language tests (PPVT, WPPSI, and Cloze Test) to determine if auditory discrimination training had any effect upon current language functioning.

After posttraining testing, all subjects were recombined for language instruction. Language instruction consisted of 'typical' elementary school lessons over the content of the Cloze Test. Following instruction, all subjects were readministered the Cloze Test to determine if the groups had differentially profited from language instruction as a result of their experimental treatment.

Results: Both training groups improved significantly in WADT performance as a result of training while the control group did not. Although the expressive group improved somewhat more overall and more rapidly than the receptive group, the differences were not significant.

Analyses of the pre- and posttraining language test scores indicated that both training groups improved on all tests following training. When compared with the control group only the gain made by the expressive group on the WPPSI scores was significant.

Comparison of the Cloze Test scores taken after training and after language instruction indicated that all groups had improved equally.

Conclusions: Auditory discrimination ability in a group of culturally deprived Negro preschool children can be significantly improved by experimental training.

The two general methods of auditory discrimination training, receptive and expressive, do not differ significantly in their effectiveness in producing auditory discrimination performance improvement.

Auditory discrimination training employing an expressive response may result in improved expressive language functioning.

Auditory discrimination training does not necessarily result in an increased ability to profit from language instruction.

34. Schutz, Samuel Roy. Rule and Attribute Learning in the Use and Identification of Concepts with Young Disadvantaged Children. University of California, Los Angeles, 1969. 166p. Adviser: Professor Evan R. Keislar. 70-8202.

The major problem of the present study was to assess the value of teaching young children two components of concepts: the relevant attributes or stimulus features and the conceptual rule by which the attributes are organized. It was hypothesized that only if children had prior learning of both components could they follow instructions which were designed to teach a new concept. Furthermore, it was hypothesized that children who learned to follow instructions involving a new rule would be superior at discovering this rule in a concept identification or inductive learning problem.

The subjects were sixty four-year-old children enrolled in Head Start classes who were able to follow directions but who did not know the components to be taught. Ss were randomly assigned to one of four treatment conditions: the Rule Learning group was taught to use the new rule of joint denial ("not...and not...") with a variety of familiar attributes; the Attribute Learning group was taught to respond to new attributes, numerals, using the familiar rule of affirmation; the Rule + Attribute Learning group was given instruction in both the new rule and the new attributes; the Control was given only pre- and posttests without training.

The effects of the different treatments were assessed by means of two posttests, a test of concept utilization and a test of concept identification. For each of the sixteen problems on the concept utilization test, children were first given the instructions which defined a concept and then were required to select, on each of four

successive items, one positive instance from among three. For this test, four categories of problems were used: one consisting of familiar attributes and the familiar rule of affirmation; another involving the new rule of joint denial but familiar attributes; a third involving the familiar rule and the new attributes; and a fourth involving both the new rule and the new attributes. The second criterion, the concept identification test, required children to induce a concept involving the rule of joint denial and familiar attributes by being presented with a series of positive and negative instances but without explicit concept definition.

The results of the concept utilization test indicated that each experimental group performed significantly better than Control if and only if the children had learned both components before or during the experiment, so that the findings were as predicted. Those four-year-old children who learned a new rule and new attributes successfully learned concepts when these were combined for the first time.

Transfer of the newly learned rule of joint denial to the concept identification problem was demonstrated for Treatment Rule Learning but not for Treatment Rule + Attribute Learning. With regard to the second criterion test, therefore, the results of the Rule Learning group suggest that under certain circumstances the formation of conceptual rules may facilitate concept identification or discovery learning. The results are discussed in terms of the implications for curricular development.

35. Southern, Mara Lee. Language-Cognitive Enhancement of Disadvantaged Preschool Children Through Modeling Procedures. Stanford University, 1969. 66p. 70-10,530.

Two experiments were performed to evaluate the effects of modeling and small group activities on language and cognitive change in samples of young, low socio-economic status (SES) children. Both experiments utilized the same treatment conditions, dependent variables, and analyses but with independent samples of subjects to test the generality of experimental results.

Experiment I involved children attending two preschool centers for children of families eligible for aid to dependent children. One hundred fourteen Ss were randomly assigned to an Experimental, a Control, or a Comparison group. The mean chronological age of the combined groups at the beginning of the experiment was approximately 52 months. Pre- and post-test data were obtained for 95 Ss.

Experiment II took place in the context of a research preschool for low SES Mexican-Americans. Forty-six Ss in this preschool were randomly assigned to either the Experimental or Control groups. A random sample of Mexican-American children enrolled in four Operation Head Start classes in the same school attendance area served as Comparison group Ss. The mean chronological age of the combined groups at the beginning of the experiment was 62 months. Pre- and post-test data were obtained for 54 Ss.

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The Experimental groups were exposed twice weekly for six weeks to a 10-12 minute live modeling session. This was immediately followed by a 20 minute small-group lesson on the task which had been demonstrated in the modeling session. The Ss in groups observed an adult female model (M) and adult male experimenter (E) demonstrate prescribed tasks. The E reinforced the M both concretely (M&M candy) and verbally for correct task performance and correct verbalization of lesson concepts. Tasks dealt with size, color, number, spatial relations, similarities and differences, and concept categorization.

The small group lesson involved Ss with the same materials as had been used by M and E. The teacher taught the lesson and verbally reinforced Ss' performances and verbalizations. The Ss did not receive any concrete rewards.

The small group activity for Control Ss was the same as for the Experimental Ss except that these Ss did not observe a modeling session.

The Comparison group Ss had no treatment other than the activities planned by their teachers.

Five dependent variable measures were employed. The Peabody Picture Vocabulary Test was used as a measure of passive vocabulary. Two subtests from the Illinois Test of Psycholinguistic Abilities: ITPA, the Auditory-Vocal Automatic: A-V and Vocal Encoding: V-E were administered as measures of: knowledge and use of underlying grammatical structure of English (A-V); and of the ability to generate descriptive and functional statements in English about common objects (V-E). The Information and Comprehension subtests from the Wechsler Preschool and Primary Scale of Intelligence were orally administered to sample general knowledge.

Each dependent variable measure was individually administered before and after the six week experimental period.

Two sets of analyses of covariance within each experiment were performed. Comparisons of terminal mean scores, adjusted for initial differences, were made using all three groups of Ss. A two group comparison of adjusted terminal scores of Experimental and Control groups was the second set of analyses.

In both experiments the three group comparison yielded significant F-ratios on the ITPA V-E subtest; Experimental Ss had the highest means and Comparison Ss the lowest means. The comparisons of Experimental and Control groups by analysis of covariance yielded no significant differences in either experiment. It is suggested that the treatment of live modeling of cognitive tasks and the small-group lesson following and the small-group lesson alone tended to affect descriptive oral language functions more than general cognitive functions.

36. Adams, Leah Dutenhaver. The Effect of Training on the Linear Ordering Ability of Prekindergarten Disadvantaged Children. The University of Michigan, 1970. 132p. Adviser: Jane Schwertfeger. 71-15,071.

The purpose of this study was to investigate whether the linear ordering ability of prekindergarten disadvantaged children could be raised

through the use of training sessions. Linear ordering tasks were selected because of the assumed relationship between linear ordering ability and the development of the concepts of cardinal and ordinal number. Jean Piaget's theory of cognitive development provided the theoretical basis. The study was also an attempt to replicate Piaget's observations regarding the sequential stages of the preschool child's ability to perform linear ordering tasks.

Data were obtained from 64 black children, with a mean age of five years, enrolled in a summer Head Start Program. The sample was randomly divided into experimental and control subjects. The experimental subjects received three training sessions, one week apart, in linear ordering. The control subjects spent an equal amount of time with the examiner, playing a matching game. One-half of the subjects were seen individually, the remaining half in groups of four. The sample was equally divided between boys and girls. All subjects were given a pretest and posttest of linear ordering ability and the Peabody Picture Vocabulary Test.

The hypotheses tested were:

1. The performance of a sample of disadvantaged preschool children on a linear ordering task will follow a stage sequence.
2. There will be a difference between subjects who receive training sessions and control subjects in their performance on linear ordering tasks.
3. Subjects who receive individual training sessions will score higher on linear ordering tasks than those who receive group training sessions.
4. Boys and girls will perform at the same level of ability on linear ordering tasks..

The hypotheses were restated in null form for the statistical analyses.

The principal findings were:

The linear ordering ability of prekindergarten disadvantaged children followed a sequential stage of development. This linear ordering ability was increased through the use of training. There was a statistically significant difference on the posttest in favor of the experimental subjects. However, the actual gain in linear ordering ability was small. There was little actual change in stage level of linear ordering ability.

No statistically significant differences were found between subjects who received individual training and those who were seen in groups of four. Because of the nature of the group sessions and the individual attention the group subjects received in other steps of the investigation, caution must be used in interpreting this finding.

There was no statistically significant difference between boys and girls on their ability to perform linear ordering tasks.

It was concluded that training may be beneficial but that the ability to perform linear ordering tasks is not dramatically altered through the use of brief training sessions. Educational implications were discussed. The data lend support to the view that teaching should take place within the context of developmental theory.

37. Bidwell, Dwight R. The Effects of Selected Physical Education Activities on the Development of Head Start Children. University of Utah, 1970. 89p. Adviser: Dean O. N. Hunter. 71-925.

The purpose of this study was to determine the effect of selected physical education activities on the development of head start children as compared to those children who participated in free play. A secondary purpose was to ascertain if selected physical education activities would significantly influence the development of girls, boys, older children, or younger children in head start classes.

It was hypothesized that there would be no significant difference between the students who received the treatment and those who participated in free play. The null hypothesis was also employed with girls, boys, older children, and younger children, subgroups of the study.

Subjects used were selected from seven head start classes from the Longfellow and Jackson schools in Salt Lake City. All of the members of these classes were pretested with the Denver Developmental Screening Test. Forty-four students in the experimental group were matched according to age, sex, and development with an equal number of students in a control group. Older students were designated as those between the ages of 58 to 64 months and younger students were designated as those between 50 and 57 months. Both the experimental and control groups met for 25 minutes a day, five days a week, for eleven weeks. The experimental group received instruction in selected physical education activities and the control group participated in a conventional free play period.

The physical education activities that were taught involved skills basic to four- and five-year-old children and included locomotor skills, non-locomotor skills, apparatus and tumbling skills, and ball skills. Movement exploration and problem solving were frequently employed as methods of instruction for the learning of these skills. Standard games and equipment and creative games were utilized to reinforce the skills as they were learned. At the conclusion of the experimental period the students were again tested on the Denver Developmental Screening Test.

The data from the testing were analyzed to test the hypotheses advanced at the onset of the study. A series of comparisons were made to evaluate the developmental progress of subjects who received instruction in selected physical education activities as compared to those subjects who participated in free play. The use of the *t* test for correlated means was employed to determine the significance of the difference in means between various groups.

Findings:

Mean differences between the pretests of the experimental groups and the control groups were low and not significant, which indicated that the matching procedures were effective and the experimental and control groups were similar at the beginning of the study. Both the experimental and control groups made significant gains in development during the duration of the study. This was also true in all of the subgroups studied.

A finding pertinent to the purpose of the study was that the experimental group made significantly greater gains than the control group. These gains were determined to be significant by comparing the posttest scores of the experimental and control group and also by statistically treating the change scores between pretest and post-test results in both the experimental and control groups. By employing similar treatments significant gains in development of all of the subgroups were also revealed. In all comparisons increases in development of the experimental group over the control group were very significant.

Conclusions:

The findings of this study strongly indicated that physical education activities are beneficial in increasing the rate of development in head start children.

Hypotheses: The general hypothesis and the sub-hypotheses were rejected due to the significant difference in improvement of development of the experimental group and subgroups over the control group and subgroups.

38. Brantley, Betty Conrad. Effect of a Sibling Tutorial Program on the Language and Number Concept Development of Head Start Children. The Florida State University, 1970. 119p. Adviser: Ralph L. Witherpoon. 71-18,352.

The purpose of this study was to evaluate the effectiveness of a short-term sibling tutorial program on the development of certain language skills and number concepts by Head Start children. Specifically, it was designed to answer the following questions:

1. Can a student in the nine-to-twelve age range help a younger Head Start sibling make significant gains (a) in language skills and (b) in mathematics?
2. Is there a relationship between the achievement level of the tutor and gains made by the tutee?
3. Is there a relationship between sex of tutor and gains made by the tutee?

Subjects were 58 five-year-old Head Start children from eight elementary schools in Hillsborough County, Florida. Within each school subjects were randomly assigned for tutoring to a language or mathematics group. Tutors who were 58 nine-to-twelve-year-old siblings of the subjects, were trained by university students majoring in elementary education. At the various schools, thirty-minute training sessions were held for each group of tutors three days a week. Following each training session, tutors met for fifteen minutes with their younger siblings and initiated planned activities under the supervision of the university student trainers. Tutors were encouraged to work regularly with siblings at home.

In evaluating the effectiveness of the program, each experimental group served as a control for the other. Measures used were investigator prepared mathematics and verbal expression tests and mean length of response.

Results: Slightly higher mean scores in verbal expression and mean length of response favoring the group tutored in language were observed. A slightly higher mean mathematics score favoring the group tutored in mathematics was also noted. An A x B analysis of variance test revealed that differences between language and mathematics subjects' scores on verbal expression, mean length of response and mathematics were not significant at the .05 level. No significant difference with regard to sex of tutor and no significant interaction effect between subject matter (language and mathematics) and sex of tutor were revealed. Application of the Pearson Product-Moment Correlation formula to the data revealed significant positive correlations (.05) between the following variables:

1. Reading achievement of language tutors and verbal expression scores of their tutees.
 2. Arithmetic computation achievement of math tutors and mathematics scores of their tutees.
 3. Average achievement (reading and arithmetic computation) of math tutors and mathematics scores of their tutees.
- A significant negative correlation (.05) between reading achievement of language tutors and mean length of response of language tutees was obtained.

Results suggested the following conclusions:

1. A short-term tutorial program involving siblings as tutors did not effect a significant change in Head Start children's language skills as measured by a verbal expression test adapted by the investigator and by a second language measure, mean length of response.
2. A short-term tutorial program involving siblings as tutors did not effect a significant change in mathematics concepts and skills attained by Head Start children as measured by a mathematics test devised by the investigator.
3. Sex of tutor was not a significant factor in the language or mathematics achievement attained by Head Start tutees.
4. A relationship between achievement level of tutor and scores of tutees on certain tests was revealed and warrants further study.

39. Buzzo, Bonnie Kathleen Wilson. Some Effects of the Race and the Language Style of the Female Experimenter on the Communication Performance of Low-Income, Black, Pre-School Children. University of Denver, 1970. 112p. 70-26,393.

The purpose of this study was to determine whether experimenter race, experimenter language style, or the interaction between experimenter race and experimenter language style would significantly affect the communication performance of low-income, Black, pre-school children. Four experimenters, two Black and two White, were trained to exhibit a standard and a modified language style. These experimenters interacted with 48 Black children in Denver, Colorado, Head Start program. Each experimenter presented 12 children with a series of objects and pictures in order to elicit spontaneous speech from each child. The interaction was tape recorded for analysis. Total verbal output was

calculated for each of the 12 subjects in all four groups and an analysis of variance was applied. While raw scores suggested that experimenter language style may be a more significant variable than experimenter race, in the effects on the children's performance neither variable was statistically significant.

Although the differences between groups were not statistically significant, raw scores indicated a consistency in the subjects' response to the four experimenters with the object stimuli, the picture stimuli, and the interactions with the experimenters initiated by the subjects. The Black experimenter using the standard language style had the highest response and the White experimenter using the standard language style had the second highest response. The Black and White experimenters who used the modified language style had similar and lower response scores. Not only was the finding of non-significant differences between groups contrary to expectations, but the differences between the examiners was not in the anticipated direction.

Possible explanations for the findings included the use of pre-school rather than school-age children, the use of Head Start children rather than children from Black families who either refused or were not interested in the educational and social opportunities provided by the Head Start program, and geographical, economic, and social characteristics of Denver, Colorado. The effects of these factors may have been more important in influencing subject performance than was experimenter race or experimenter language style.

40. Caldwell, Janet Barbara. A Preschool Screening Program. Purdue University, 1970. 129p. Adviser: Jack Dunsing. 71-9373.

The purpose of this project was to design and implement a program for diagnostic screening and short term preschool intervention appropriate for communities with limited professional and financial resources. First, the Preschool Screening Battery was compiled by a professional clinic staff and administered by PTA volunteers to 126 kindergarten age Ss in Shawnee, Oklahoma, to determine problems in areas of general ability, vision, speech and hearing, and social maturity. Item analysis of this battery permitted its condensation into three shortened tests for general ability, vision, and speech and hearing. Second, the original battery was administered to an enriched kindergarten group and a Head Start group. Differential performance obtained on six subtests supported the shortened form of this battery and suggested that the middle-class Shawnee group was as adequately prepared for first grade as the enriched kindergarten group. The Head Start group performed less adequately. Third, preschool classes for low-scoring Shawnee Ss were conducted for eight weeks. Two teachers, one lay and one professionally trained, taught these classes of five Ss each. Both classes made significant improvements in verbal, numerical, and copying skills when compared with a control group. The three phases of this project supported the use of a preschool diagnostic screening battery and short-term readiness classes, both using lay volunteers under professional supervision, in community-wide programs.

41. Johnson, Dave Petre. A Follow-Up Study of Pupils From the Brevard County Full Year Head Start Program Who Entered the First Grade in the Brevard County Public School System. The University of Michigan, 1970. 165p. Adviser: Stewart C. Hulslander. 71-15,189.

This is a follow-up study of 137 children who participated in the Brevard County Full Year Head Start Program. The study proposes to find out how effectively the Head Start Program prepared the children to make adequate adjustments upon entering first grade in the Brevard County Public Schools.

The Head Start Children's ages ranged from 67 months to 76 months. (All pupils must be six years of age on or before January 1, of the school term in order to enroll for that term.) Eight of the children in the Head Start group were white; all of the other children were black.

A control group consisting of 141 black pupils was selected from an all black school which was located in a low socio-economic neighborhood. The assumption was that the control group would approximate the variables which were being studied in order to evaluate the Head Start children.

In order to determine the similarities or differences which existed between the two groups, both groups were administered the American Guidance Service, Inc. First Grade Screening Test, the Western Psychological Services, Child Behavior Rating Scale and The Stanford Achievement Test Battery: Primary I.

This study utilizes a Chi Square Blitz, correlation coefficient, and analysis of variance to examine five null hypotheses and six null sub-hypotheses which states that there is no significant difference between the socio-economic levels of the groups; the abilities to adjust to teachers, peers and school situations; abilities to perform tasks which indicate ability to work successfully in the first grade; and the intellectual achievement of the two groups.

An analysis and interpretation of the data indicated that two of the sub-hypotheses were supported in favor of the control group. The control group had higher significant mean scores in word meaning and arithmetic. Four of the five central hypotheses were accepted; one was rejected in favor of the Head Start group. The Head Start Group's F-Ratio was significant at the .01 level on the First Grade Screening Test, therefore the hypothesis was rejected.

The data of this study show that the children who participated in the Brevard County Full Year Head Start Program scored higher on the test used to measure readiness for the first grade than the control children who did not participate in the Head Start Program. This gain over their peer group was not evidenced in intellectual achievement.

There should be more articulation between the Head Start Programs and the schools in order to avoid the decrements which the disadvantaged children encounter upon entering school. Head Start programs have been successful in providing meaningful experiences for deprived children; it is now incumbent upon the schools to follow-through in order for these children to continue having incremental and rewarding experiences in the school environment.

42. McAdoo, Harriette Ann Pipes. Racial Attitudes and Self Concepts of Black Preschool Children. The University of Michigan, 1970.
175p. Adviser: Lorraine Nadelman. 71-4677.

This study was concerned with the relationship between the racial attitudes and self concept of Black preschool children. The principal hypotheses were (1) There will be a relationship between better racial attitudes towards Blacks and higher self concept for these children. (2) Children in a Southern, all Black, rural community (Mound Bayou, Mississippi) will have better self concepts than children in a Northern, integrated, urban community (Dearborn Heights, Michigan). (3) Children with higher IQ scores will tend to have better self concepts and positive attitudes to Blackness. (4) Children from intact families will have higher self concepts and more positive racial attitudes toward Blacks than those children from nonintact families.

Care was used in selecting the sample to have children whose tested IQ was over 70 and who were enrolled in year long Head Start Centers. Forty-three children were in the Southern sample and thirty-five in the Northern sample. Special attention was given to the sex differences in each of the measures.

The Peabody Picture Vocabulary Test was used to measure IQ; the Williams and Roberson Racial Attitude and Sex Role Attitude Measure was used to test racial attitudes and sex-typing attitudes; the Thomas Self Concept Values Test was used to measure self concept. The latter test used a Polaroid picture of each child to aid in measuring his self concept.

The findings were: (1) No correlation was found between racial attitudes and self concept. (2) Children in the all Black Southern rural community were significantly higher in self concept, while no difference was found in their racial attitudes. (3) No correlation between IQ and the two mean variables was found, and the Northern sample was significantly higher than the Southern one in IQ scores. (4) No significant difference was found between children from intact and those from nonintact homes, on the two main variables. However, the nonintact children were consistently higher on all self concept scores and subscores and they had a nonsignificantly more positive attitude towards Blacks. (5) Boys were significantly higher than girls on self concept, while no statistically significant sex difference was found on the racial attitude scores. With modified scoring of the self concept test, boys were nonsignificantly higher than girls.

The racial attitudes of these Black children were more positive to whites than to Blacks, but better than those of Williams and Roberson's white preschool sample, with whom this sample is compared.

Cautions must be taken in interpreting these findings, and generalizing to other samples of Black children. The race attitude and IQ test were both standardized on a white Southern population.

Future research in this area could center on the comparison of low

and middle income children; on Black children those in a dominantly white school with those in a school that may be half Black. Longitudinal studies could be made to measure the changes that occur over time in self concept and race attitude. This study should be replicated in a few years to attempt to get some measure of the effect that the Black consciousness movement is having on the attitudes of Black preschool children.

43. Miller, Arthur Wayne. A Study of Head Start's Influence on Schema Used in Art by Disadvantaged Children. University of Kansas, 1970. 120p. 71-13,398.

Studies made of Head Start's influence on disadvantaged children's behavior have shown that Head Start programs have not been very effective. One aspect of Head Start that had not been evaluated was schema in child art. The purpose of this study was to determine Head Start's influence on schema in disadvantaged children's art.

The sample consisted of 150 first-grade children in a metropolitan area of over 300,000 population. These children had equal representation from middle-class, Head Start, and non-Head Start groups. Each child made a two-dimensional crayon drawing and a three-dimensional clay project. For each project a topic motivation was used which allowed the child to bring his own concepts of the subject to the media. These projects were collected and judged independently by three judges with similar background.

Analysis of variance followed by Tukey's HSD Test for Separate Pairs was used to test 8 "null" hypotheses. The following conclusions were drawn:

1. Head Start's influence on schema in disadvantaged children's art is negative.
2. Head Start children and disadvantaged non-Head Start children do not differ significantly in schema from each other. When compared to middle-class children, differences do appear between Head Start and disadvantaged non-Head Start children's art projects.
3. For three-dimensional projects middle-class children scored significantly higher (.01 level) than Head Start children, but no significant difference occurred when middle-class children were compared with disadvantaged non-Head Start children.
4. For two-dimensional projects middle-class children scored significantly higher (.01 level) than Head Start children. When compared with disadvantaged non-Head Start children, an .05 level of significant was reached.

44. Rockey, Randall Earl. Contrastive Analysis of the Language Structures of Three Ethnic Groups of Children Enrolled in Head Start Programs. Cornell University, 1970. 107p. 71-13,817.

Compensatory education for disadvantaged preschool children includes

as one of its central components a planned intervention program which is to provide the deprived child with linguistic skills comparable to those acquired naturally by children with a middle-class background. A commonly accepted objective for compensatory education programs at this age level is to facilitate the child's eventual task of learning to read and write a standard form of American English. The language barrier has been recognized as fact by most authorities though they have not been in complete agreement as to whether the gap should be attributed to a language "difference" or to a language "deficiency" model. The hypothesis guiding the design and implementation of this study was that ethnicity also contributes to language differences. To test this, a contrastive analysis was performed on the syntactic and morphological structures of three different ethnic groups of disadvantaged children in an attempt to identify the relative contribution of ethnicity to the differences.

The speech of economically disadvantaged Negro, Seneca Indian, and Caucasian four-year-old children was analyzed and contrasted to determine those grammatical parameters that serve to identify the language of each of the three populations as dialectal variants. A fourth group was selected from a middle-class white population to provide a standard measure against which the three deprived groups could be contrasted. In this way, the standard grammatical norms were those for four-year-old speakers and not adults. Ten subjects were selected from each of the four groups for a total sample of 40 children. The disadvantaged children were all enrolled in full-year Head Start programs in Upstate New York and had been recruited from needy homes according to the criteria established by the Office of Economic Opportunity. The privileged subjects were selected from a nursery school population.

A focused interview was developed to elicit a corpus of spontaneous, but guided, speech from each of the 40 subjects. It consisted of an hour and a half of subject-interviewer interaction based on a variety of activities. The verbal performance of the child was recorded and subsequently transcribed for the linguistic analysis.

The analysis consisted of reducing the data to a number of grammatical categories selected to measure the subjects' varying control and use of embedding transformations, the formation of questions, the use of be as copula and auxiliary, and morphological rules such as case forms and past tense affixes. Length of utterances and proportions of well-formed to variant constructions served as indices of fluency along with measures of relative variety of sentence types used by each subject. The frequency of occurrence of each of the categories was tallied and group means were then calculated for each of the populations. A two-way analysis of variance was programmed for computer use and the F-ratios resulting from the contrast of the four means indicated whether statistical significance had been achieved for each of the variables.

The disadvantaged groups and the privileged group used very similar structures. There were a few grammatical categories that were sensitive to differences, but these were outweighed by the bulk of variables that indicated that all the subjects were operating with similar

grammatical rules.

The deficiency model proposed by some as being characteristic of disadvantaged speech was not supported by the evidence provided by this study. The deletion of to be clearly identified the Negro group, but this variant rule was systematic in its difference from the middle-class and other ethnic groups. Its use was different, but not necessarily deficient.

In general, the four groups were similar in language performance more consistently than had been anticipated.

45. Leigh, Terrence M. An Examination and Comparison of the Health Services Received by Participants and Non-Participants in a Full-Year Head Start Program. University of Kentucky, 1971. 217p. Adviser: Dr. James T. Moore. 71-25,902.

The purpose of this study was to determine whether the health services received by Head Start participants were superior to the medical services received by children who did not participate in the Head Start program. The factors used to determine the relative effectiveness of the Head Start health services were: (1) the kinds or types and numbers of abnormalities identified and referred, and (2) the number of children and abnormalities referred according to the economic and social conditions of each child's family.

The sample contained in this study consisted of 106 matched pairs of children (fifty-eight matched pairs of girls and forty-eight matched pairs of boys) distributed over three years of Head Start experience. The sample was selected from a county in Eastern Kentucky. The population of this county is predominantly rural, non-farm, with approximately seventy percent of the families in the county having incomes of less than \$3,000.

An IBM "360" computer and a Multivariate Cross-Classification Program entitled NUCROS was used to distribute data on the number of examinations, frequency of abnormalities and frequency of referrals across demographic information for statistical analysis and comparison. A chi-square test and a one-tailed t-test of the significant difference between proportions were used to test various findings for significance.

The results of the study showed that: (1) a significantly greater number of Head Start children did receive medical examinations through participation in the program, (2) the Head Start children did not have a significantly greater number of abnormalities identified or referred, (3) the number of children identified as possessing abnormalities was not significantly greater among the Head Start children, and (4) the number of children referred for further examination and/or treatment of identified defects was not significantly greater among the Head Start children.

In addition to the above findings the following observations were made:

- 1) The types of abnormalities that were identified among both groups of children were basically alike. The only difference that was

observed was in the greater number of abnormality types among the Head Start children that required greater involvement in diagnosis determination.

- 2) A greater proportion of non-Head Start children were referred.
 - 3) The proportion of abnormalities referred was slightly greater among the Head Start children.
 - 4) Very little difference was observed between groups in the referral percentages of abnormalities grouped according to physiologic and body system involvement.
 - 5) The physiologic categories of abnormalities of the nasal and oral cavities and abnormalities of the eyes accounted for the greatest number of abnormalities identified and referred in each group.
 - 6) The children of parents with very little schooling, the children of breadwinners with low employment levels, the children of families with very little income and moderate income, and the children of families with 2-6 members seem to have a greater opportunity to be referred if they do not participate in the Head Start program.
- In an effort to enhance the overall effectiveness of the Head Start Health Services program in the county studied, it was recommended that:
- 1) All medical and screening examinations be conducted at a centrally located facility or at the physician's office.
 - 2) Only high priority or extremely serious abnormal health conditions be recorded on the child's health record.
 - 3) More technical terminology be used to record or describe the physician's diagnostic impression.
 - 4) Whenever possible therapeutic or restorative measures should be carried out at the time of the examination.
 - 5) Repeated efforts be made to solicit parental cooperation through letters and/or conversations describing in detail purposes and procedures of the health examinations, insistence that one or both parents be present at the time of examination (accordingly, more intensive efforts to provide transportation and "baby sitting" should be needed), and on the spot education of parents as to the seriousness of identified defects and the essentiality of further examination and/or treatment.
 - 6) Referral efforts be redefined to include greater personal contact attempts, especially for children of families classified as more deprived as determined by schooling, employment, and income indicators, and males enrolled in the Head Start Program.
 - 7) Referral efforts be intensified for children suspected of possessing: vision abnormalities, blood problems, urinary system abnormalities, speech defects, and hearing disorders.
 - 8) Pre-determined time intervals for follow-up be set in order to appraise the efficiency of referral both during and after the Head Start program has ended.
 - 9) When another program has taken over referral, the Head Start program should continually be appraised of the progress of referral measures, in that way keeping all records up to date.
 - 10) Greater emphasis on health education be included in the instructional component of the Head Start program.

46. McGee, Grace Ann. An Evaluation of the Effects of the Bessell-Palomares Human Development Program on Five Year Olds in an Appalachian Head Start Class. The University of Tennessee, 1971. 198p. Adviser: Dr. A. Montgomery Johnston. 72-5462.

The primary purpose of this study was to evaluate the effects of the Bessell-Palomares Human Development Program on five and six year olds enrolled in an Appalachian Head Start Class.

The nine subjects studied participated in a 28 week training period using the Human Development Program materials.

The subjects were given pretests and posttests with the Peabody Picture Vocabulary Test and the California Test of Personality. The Wilcoxon Signed Rank Test of differences was used to analyze the data from the tests. The subjects were also evaluated by the Developmental Profile, a rating scale designed by the authors of the Human Development Program.

Case studies were written on each of the subjects. These included data concerning age, sex, parental occupation and socio-economic level, number of family members, birth order in family, health status, and anecdotal accounts of behavior during the training program.

An increase at the .05 level of significance was found between the pretest and posttest IQ scores. No significant difference was found between the pretest and posttest scores on the Social Adjustment and Personal Adjustment components of the California Test of Personality.

There was a mean improvement of more than two points on the zero to 10 rating scale of the Developmental Profile, in Awareness (Self and Others); Mastery (Self-Confidence and Effectiveness); and Social Interaction (Interpersonal Comprehension and Tolerance). While the authors of the Human Development Program did not state what constituted significant growth as measured by the Developmental Profile, before the study began, a two point change was arbitrarily selected by the researcher as indicating significance.

An examination of the subjective data indicated that the Human Development Program did facilitate positive growth in self-acceptance, self-confidence, verbal expression, spontaneity, risk-taking, acceptance of others, and caring.

Further research utilizing the same or a different experimental design needs to be done with culturally disadvantaged five year olds in Appalachia using the Human Development Program or similar techniques and materials to determine whether the positive growth indicated in this study could be replicated.

Other recommendations for consideration include the development of more adequate instruments for measuring emotional growth in culturally different preschool children; emotional education programs that begin earlier and continue for several years; comparison of methods and materials that facilitate emotional growth to determine which are more applicable to the Appalachian culturally disadvantaged; and programs dealing with emotional education conducted in residential settings which could involve parents or other family members.

It is felt that culturally disadvantaged five year olds in an Appalachian Head Start Class did benefit positively from participation in

the Human Development Program and that teachers in similar areas should be introduced to the program and encouraged to use it with preschool children.

47. Noland, Juanie Sue L. Self-Concept and Achievement of Kindergarten and Head Start Children. Auburn University, 1971. 112p. Adviser: Mildred R. Ellisor. 72-11,280.

The purpose of this study was to determine if there existed a significant relationship between self-concept and achievement of selected Opelika, Alabama, Negro Head Start children, and Auburn, Alabama, White kindergarten children.

The study attempted to answer three basic questions:

1. Is there a significant difference in achievement between White Kindergarten and Negro Head Start children?
2. Is there a significant difference in self-concept between White Kindergarten and Negro Head Start children?
3. Which of two self-concept instruments is more predictive of achievement in kindergarten and Head Start?

The sample included thirty White private kindergarten children and thirty Negro Head Start children.

The data gathered consisted of scores on the following three instruments: (1) The Boehm Test of Basic Concepts, (2) The Clark U-Scale, and (3) The Self-Esteem Subtest of the Children's Self-Social Constructs Tests.

Analysis of variance and Pearson's Product Moment statistical techniques were utilized in testing the null hypotheses. The .05 level of confidence was established as the basis for statistical significance.

The following conclusions were reached:

1. White kindergarten and Negro Head Start children differed significantly in achievement, in favor of the kindergarten children.
2. White kindergarten and Negro Head Start children differed significantly in self-concept, when measured by the U-Scale; they did not differ when measured by the Self-Esteem Subtest.
3. The U-Scale self-concept test was more predictive of achievement in kindergarten and Head Start than was the Self-Esteem Subtest.

48. Scruggs, Allie W. The Effect of the Fall River and Lowell Head Start Programs on Behavioral Characteristics Associated with Lower Socio-Economic Class Preschool Children. Boston University School of Education, 1971. 381p. Adviser: James F. Penney. 71-26,737.

This study was an attempt to determine the effectiveness of two Head Start programs in influencing these behavioral characteristics.

In order to evaluate the effectiveness of the two Head Start programs it was necessary to identify the specific characteristics that the programs were attempting to influence. The characteristics identified were those cognitive, affective, and physical traits upon which future performance in school depends. Instruments then were chosen that

could measure these characteristics. Children with known deficiencies in these areas were subjected to programs deliberately designed to positively alter these characteristics and treatment was withheld from some children with known deficiencies. The children were measured before and after an exposure period to determine if the treatment had been successful.

A first sample of forty-two children, aged four, was selected by reference to a table of random numbers from among applicants who qualified for the Fall River, Massachusetts program. The evaluation design included three levels of program participation and three occasions of testing. The findings prompted further investigation to determine if differences identified would be supported by further study. The second sample consisted of forty children in Lowell, Massachusetts. The combined samples less those lost through attrition resulted in a total N of sixty-nine.

The major findings were as follows: comparison of the study's Head Start participants' responses to the test variables with the non-participants' responses revealed: (a) the participants and non-participants made significant gains on a number of the same variables, making it extremely difficult to draw inferences about program effects; and (b) variables were found that discriminated between the two groups in the Fall River study. Participants made significant gains in intellectual functioning as measured by the Stanford-Binet and by the Parent Rating Scale. Control group members did not make such gains. The same conclusion was true for visual discrimination as measured by the Frostig-Figure Ground and for auditory discrimination as measured on the Illinois Test of Psycholinguistic Abilities subtest-Audio-Decoding. Control of aggression, (on between-group comparisons, as measured by the Tasks of Emotional Development Test-TED) was significant for participants as opposed to non-participants. Only the non-participants made significant gains in perceptual development— as measured by the Marianne Frostig Developmental Test of Visual Perception subtests: Discriminating-Form Constancy, Differentiating Position-in-Space, Eye-Hand Coordination, Perceiving Spatial Relations; the Illinois Test of Psycholinguistic Abilities (ITPA) subtest-Visual Motor Sequencing; and the Lee-Clark Reading Readiness (LCRR) subtest-Word Symbols. The same was true for psychomotor development as measured by the Parent Rating subtest-Ability to Perform Physical Tasks.

The second phase of the study involved a comparison of Fall River and Lowell subjects on variables that discriminated between the Fall River participant and non-participant subjects. The Fall River participant results were supported by the Lowell participants on three comparisons: Stanford-Binet, Frostig subtest-Figure Ground, and ITPA subtest-Audio-Decoding. Fall River participant results were contradicted on three comparisons: Parent Rating Scale subtest-Intelligence Tasks; control of aggression, on between-group comparisons, as measured by the TED; and Rating Scale subtest-Intellectual Tasks on between-group comparisons. When the Fall River and Lowell data were combined, the Fall River results were supported on four comparisons: Stanford-

Binet, Frostig subtest-Figure Ground, ITPA Audio-Decoding, and control of aggression (on between-group comparisons, as measured by the TED); and contradicted on the Parent Rating Scale subtest-Intellectual Tasks, and on the latter subtest on between-group comparisons.

Results for Fall River non-participants were supported by the Lowell non-participants on five comparisons: Frostig-subtests-Discriminating Form Constancy, Differentiating Position-in-Space, and Spatial Relationships; ITPA subtest-Visual-Motor Sequencing; LCRR subtest-Word Symbols. They were contradicted on three comparisons: Frostig-Subtest-Eye-Hand Coordination, Parent Rating Scale subtest-Physical Tasks, and Frostig-subtest-Position-in-Space on between-group comparisons. When the Fall River and Lowell data were combined, the Fall River non-participant results were supported on seven comparisons: Frostig-subtests-Discriminating Form Constancy, Differentiating Position-in-Space, Eye-Hand Coordination, and Spatial Relationships; ITPA subtest-Visual Motor Sequencing; LCRR subtest-Word Symbols; and Parent Rating Scale subtest-Physical Tasks. They were contradicted on one comparison: Frostig subtest-Position-in-Space on between group comparisons.

Findings suggest that prevailing test norms may not legitimately apply to the disadvantaged child. It is possible to interpret the major findings as showing that the participants became intellectually oriented but in the process sacrificed psychomotor and perceptual development, areas in which the non-participants consistently made significant gains.

When the Fall River and Lowell data were combined, the Fall River non-participant results were supported on seven comparisons and contradicted on only one comparison. This raises serious questions regarding previously held notions regarding the developmental patterns of the disadvantaged child.

Such children at ages four and five appear to make significant gains at normal developmental rates on perceptual and psychomotor development factors.

The study showed that these two Head Start programs were effective in accelerating cognitive growth while they were less successful in influencing rates of perceptual and psychomotor development.

49. Feeney, Stephanie Singer. The Effects of Two Curriculum Models on Aspects of Autonomy and Learning in Head Start Children. Claremont Graduate School and University Center, 1972. 151p. 72-11,191.

This dissertation explores the effects of two preschool programs on curiosity, creativity, self-directedness of learning, and approach to new materials. The two programs were chosen to represent widely differing theories. The first emphasizes a structured academic approach using systematic social and material reinforcements and is based on the Engelmann-Becker preschool model. The other prescribes free choice of activities in a prepared environment in which the child's activities are regarded as intrinsically rewarding and is based on Nimnicht's

Responsive preschool model.

The sample used in the study consisted of fifty-one children enrolled in the Marin County, California Head Start program during the 1970-71 school year. Two classes of children were assigned to the academic model and two classes to the responsive model. Each treatment group consisted of one class of children who were predominantly three years old and one class of children who were four years old.

Differences in program effects were assessed using four instruments. Two measures from Banta's Cincinnati Autonomy Test Battery (CATB) were employed. The Curiosity Box test of exploratory behavior was used to measure curiosity and the Dog and Bone test of innovative behavior was used to measure creativity. Aspects of the child's approach to materials and stance toward learning were recorded and compared using a Free Play Observation instrument. Finally, classes were compared using a Classroom Observation Schedule designed to indicate how self-directed learning is when the teacher is not present in the classroom.

The following results were found. Children in the responsive model classes scored higher on the curiosity measure than children in the academic model classes. This difference was found to be statistically significant at the .06 significance level. No significant differences were found between models on the measure of creativity, on the Free Play Observation, or the Classroom Observation Schedule. The lack of results on the last two instruments may be explained by the trial nature of these instruments which were developed by the investigator and used for the first time in this study.

Several limitations of the study may have influenced these outcomes. First, extensive classroom monitoring revealed that the programs, although they differed in aspects of content and in the type of reinforcements used, were not as differentiated from each other as had been prescribed. Second, the experimental period of fifteen weeks may not have been long enough to tap the subtle aspects of learning being assessed. Third, the three year old classes were not equivalent in age; the academic model had a group of children under three and one half who did poorly in the curiosity and creativity measures and there was not a comparable group of children under three and one half in the responsive group.

Since a significant difference between treatment models was found on the curiosity measure even under the limitations of the present study we conclude that strong program influences may be at work on this behavior and perhaps on related behaviors as well. The results of this study combined with other recent research suggest that programs which allow free choice and encourage exploration of the environment do enhance the development of curiosity, creativity and other aspects of autonomous functioning in children.

Follow Through Programs

50. Doyle, Michael Vincent. An Investigation and Evaluation of Speech Education in Pre-School and Early Elementary Programs for the Disadvantaged. Michigan State University, 1969. 151p. 69-20,845.

The purpose of this study was to investigate the pre-school and early elementary programs for the culturally disadvantaged. Using primarily Head-Start and Project Follow-Through, funded programs of the Department of Health, Education and Welfare, this study focuses on speech and language arts improvement through the implementation of such programs.

From the perspective of the social system, communication skills are a tool for achieving academic success. The culturally disadvantaged child is defined in relation to the social class and generally lacks communication skills. Unable to relate to his peers, the culturally disadvantaged child cannot communicate with them, nor adopt their behavior patterns. Hence, he remains trapped by his inability to communicate.

In compensatory pre-school and early elementary programs the scope of the varied programs is revealed in terms of quality, personnel, finances, cost, academic emphasis, and parent participation. The programs document the need for intensive language arts training for pre-school and early elementary children. Verbal sophistication to meet the standards of our society is a primary objective of the programs. The programs documented in this study represent efforts in both large and small cities across the country. The study reviewed white, Negro, Spanish American, and Indian disadvantaged children.

A survey of 114 textbook companies was conducted to determine the availability of books and resource materials in three categories: language arts materials for the teacher and administrator, language arts materials for the student, and general language arts sources. It appears that in their sources publishers focus upon oral language development-speaking, listening, and vocabulary. Further, it seems that the materials for the culturally disadvantaged language classes are sufficiently flexible so that they can be used separately or in units combining language and speech.

The Bereiter-Engelmann structured language program which is thoroughly reviewed in this study, was tested in a full year Head-Start program in Grand Rapids, Michigan, schools. Preliminary statistical data, cited in this study, help to provide guidelines for educators to consider a national restructuring of pre-school compensatory programs.

Major recommendations of this study document the need for in-service training programs in speech education and language arts programs for certified teachers, as well as the need for parent involvement in language arts in compensatory education. Resource centers for information concerning the culturally disadvantaged should be located in all fifty states. Finally, the speech educator should become involved in all phases of education involving the disadvantaged, including developing materials for classroom use and directing research in speech and language arts programs.

51. Oldiges, Donald Allan. A Longitudinal Study of the Effects of Early Childhood Compensatory Education Programs in Dayton, Ohio. The University of Wisconsin, 1969. 291p. Adviser: Professor Richard A. Rossmiller. 69-22,453.

The purpose of this study was to investigate differences in mental maturity test scores and school functioning ability among second grade pupils in Dayton, Ohio, who had participated in the following four program combinations: Pre-School with Follow Through, Head Start with Follow Through, Follow Through only, and a Comparison group composed of pupils enrolled in schools not qualified for compensatory education programs and who thus had not participated in such programs.

The hypotheses and ancillary questions investigated in this study dealt with scores on the California Test of Mental Maturity, performance ratings given by teachers on an instrument designed for this purpose, pupil mobility, school attendance, and relative costs and benefits of the programs. The data were examined to ascertain whether there existed significant differences among and within the four groups. Data were gathered for a random sample of pupils who participated in each program. Sample sizes were as follows:

Pre-School with Follow Through, 51; Head Start with Follow Through, 75; Follow Through only, 471; and Comparison group, 511.

Findings:

1. The mental maturity test scores of pupils who comprised the Comparison group were significantly higher than those of the pupils who participated in each of the three early childhood compensatory education programs.
2. No significant differences were found between the mental maturity test scores of pupils who participated in the three compensatory education programs.
3. There existed significant differences between mental maturity test scores of pupils who were members of minority and non-minority groups and who participated in the compensatory education programs, with non-minority pupils scoring higher in each case.
4. Total ratings of pupil performance received by the Comparison group were significantly higher than those received by members of the three compensatory education program groups.
5. Some significant differences were found between the actual and expected performance ratings received by pupils in the three compensatory education programs. The ratings received in kindergarten were lower than expected for Head Start with Follow Through and Follow Through only; they were lower than expected in grade two for Follow Through only.
6. Pupils in the three compensatory education programs missed significantly more days of school in the first grade than did pupils in the Comparison group; in kindergarten, only pupils in Follow Through only program missed significantly more days of school.
7. Over 40 percent of the pupils in each of three compensatory education programs had changed schools at least once by the time they were in second grade, compared to 28 percent of the pupils in the Comparison Group who changed schools.

8. Program costs per pupil were as follows: Pre-School with Follow Through, \$621.15; Head Start with Follow Through, \$236.67; Follow Through only, \$68.16.

Conclusions: When viewed in terms of relative costs and benefits, it was concluded that the most expensive program (Pre-School with Follow Through) was the most effective program; that the second most expensive program (Head Start with Follow Through) was the second most effective program; and that the least expensive program (Follow Through only) was also the least effective of the three programs. It was tentatively concluded that the additional benefits provided by the Pre School with Follow Through program, in terms of the performance ratings received by pupils who participated in the program, are sufficient to warrant the higher expenditures which the program entails. However, additional data over a longer period of time are needed before a firm conclusion may be drawn. It is anticipated that the additional data needed will be obtained in Phase II and Phase III of a continuing longitudinal study of the effectiveness of the three early childhood compensatory education program combinations.

52. McGill, Audrey Janet. The Effectiveness of the Use of Puppets in Oral Language Development of Culturally Disadvantaged First-Grade Children. North Texas State University, 1970. 124p. 71-8682.

The problem of this study was to evaluate the effectiveness of the use of puppets in oral-language development of culturally disadvantaged first-grade children. A four-month experimental study was conducted, during which time the subjects participated in thirty-two oral-language development lessons, with the experimental group responding with the use of puppets, and the control group responding without the use of puppets. The two purposes set for this study were, one, to ascertain the effectiveness of puppets with instructional media in oral language development of culturally disadvantaged first-grade children, and two, to derive the implications of this effect for instructors, teachers, and others working in programs for the culturally disadvantaged.

Four classrooms with a combined total of seventy-seven culturally disadvantaged first-grade children, enrolled in a Follow Through Program of a large metropolitan school system, served as subjects. Pre- and post-measures of oral-language development were obtained through the quantitative analysis of the spontaneous verbal responses of each subject, recorded during individual interview sessions. Seven aspects of extent of verbalization and three aspects of vocabulary development were measured. Also included was a standardized picture vocabulary test measuring receptive vocabulary, which yielded an intelligence quotient for each subject.

Three hypotheses were formulated to predict significance of differences between the two groups, with the following results determined:

1. For Hypothesis I, Extent of Verbalization, the results showed no variable, among the seven tested, reaching the .05 level of significance; therefore, the null hypothesis was accepted.

2. For Hypothesis II, Vocabulary Development, the results showed no variable, among the three tested, reaching the .05 level of significance; therefore, the null hypothesis was accepted.

3. For Hypothesis III, Verbal Intelligence, as indicated by receptive vocabulary, there was no significant difference between the mean gains of the two groups; therefore, the null hypothesis was accepted.

In the light of the evidence and due to the limitations of the study, the following conclusions appeared to be justified:

1. The use of puppets in oral-language development lessons does not significantly increase the verbalization skills of the participating students.

2. The use of puppets in oral language-development lessons does not significantly increase the vocabulary development of the participating students.

3. The use of puppets in oral-language development lessons does not significantly increase the verbal intelligence scores of the participating students.

Non-hypothesized data, as pertaining to inner-action effect, failed to reveal any significant differences between the experimental and control sub groups. It was noted, through statistical analysis, that while there were no significant differences between the experimental and control groups, there also appeared to be no significant oral-language gains made by either group during the period of time of the study, implying that the groups had attained a plateau of oral-language development and maintained the plateau during the experimental period. Other implications derived from the data were as follows:

1. Extreme variability within the groups selected may have caused the mean gains to appear insignificant between the groups.

2. Shy, verbally limited children resist using puppets in activities that require them to perform individually in audience situations.

3. Verbally proficient children can serve as models for puppet utilization for less proficient children.

4. The use of puppets appeared to be a hindrance when the children were highly motivated to communicate with others.

5. The puppets were best used for entertainment or play and were a hindrance during goal-directed activities.

53. Middendorf, Lorna Ann. Mothers as Mediators of Change in the Perceptual and Learning Abilities of Inner City Kindergarten Children. Rutgers University, The State University of New Jersey, 1970. 164p. 71-483.

This research study examined the relative effectiveness of involving the mothers of disadvantaged kindergarten children as mediators or agents of change in the perceptual and learning abilities of their children.

A major hypothesis was tested regarding the effects of training, age, and sex, alone, and in combination on posttraining perceptual ability scores. A related minor hypothesis predicting positive relationships among changes in the measured perceptual abilities of children participating in the Frostig Developmental Program in Visual Perception under the supervision of their mothers, and such maternal influences as achievement expectancies, attitudes, and evaluations of the training program was also tested.

A second major hypothesis was tested predicting a positive relationship between the factor patterns of the functional unities underlying

a battery of standardized perceptual and learning ability tests and participation in the Frostig Program. A minor hypothesis relating positive changes in perceptual and learning abilities in this study population with the Frostig training program was also tested.

Method: Three groups of inner city kindergarten children enrolled in Project Follow Through were randomly assigned to three treatment conditions: training by mothers, training by teachers and no training. The Frostig Developmental Program in Visual Perception-Beginning Pictures and Patterns was mediated or instructed by mothers participating in a ten-session voluntary training program conducted by the study investigator, and by the classroom teachers. The period under investigation was four months. Pretest and posttest Frostig measures, as well as pretest-posttest scores from the California Test of Mental Maturity, the Brenner-Gestalt, and the Peabody Picture Vocabulary Test were obtained. Mothers responded to the Parental Developmental Timetable, a questionnaire and an adjective check list. For analysis purposes, groups were divided by sex and by age (younger and older). The study population included 79 kindergarten children and 27 participating mothers.

A multivariate analysis of variance technique was applied to the analysis of treatments, age and sex effects alone and in combination on the level of posttest scores. Two influences were controlled statistically: mental age and Frostig pretest scores.

An analysis of variance design for repeated measures examined treatments, age and testings interactions. Mothers' responses were subjected to the Mann-Whitney, Kendall, chi square and Osgood's D techniques.

Factor analyses of pretest and posttest measures were performed using principal components procedures with Varimax, rotated factors solutions.

Findings: The major findings from the implementation of the general study design were:

Hypothesized significant differences between experimental and contrast groups in level of posttest scores and treatment (training) conditions, sex and chronological age, independent of pretest and mental age influences were not supported.

Hypothesized significant relationships among positive changes in measured perceptual abilities as a result of training by their mothers and maternal expectancies for very early independence-granting and low controlling were confirmed. Other relationships among maternal influences and relative measured achievement were not confirmed.

Changes in the patterns of measured perceptual and learning abilities supported the hypothesized positive relationship between participation in the Frostig program and changes in the functional ability factor structure.

Both qualitative and quantitative shifts in factor patterns confirmed the hypothesized relationship between changes in the perceptual and learning abilities in this study population and training with the Frostig program.

It was concluded that disadvantaged mothers could mediate relatively positive changes in the perceptual abilities of their kindergarten children given basic training in implementing a developmental learning

program for visual perceptual skills. The relative success of the mother as mediator in this study had a relationship to her very early expectations for independent behaviors in her child and her own low controlling attitude. From an exploratory effort, it was also concluded that training in a specific ability area could have an influence on the developing patterns of perceptual and learning abilities, suggesting that the interactions of functional behaviors may be more important in early learning programs than training or analysis of isolated operations.

54. Sanders, Frank Jarman. A Study of the Impact of the Chattanooga Public Schools' Head Start Follow-Through Program 1967-70. The University of Tennessee, 1970. 108p. Adviser: Dr. Charles Achilles. 71-17,773.

This study was to assess Chattanooga Public Schools Follow-Through Program 1967-70 to determine the program's impact as related to the objectives stated in the grant application. The purpose of this study was to determine the effectiveness of the Follow-Through Program on the academic achievement of selected pupils from 1967-70. It was a second purpose of this study to evaluate the impact of the Follow-Through Program in relation to nonacademic objectives. The study was restricted to one hundred pupils in the program and a control group of equal size randomly sampled from similar inner-city elementary schools. Four groups of children were included: (1) those pupils having three years of Follow-Through experience; (2) those pupils without Follow-Through experience; (3) those pupils having had Head Start experience and Follow-Through; and (4) those pupils having had no Head Start with Follow-Through experience.

For the purpose of this study, the Metropolitan Readiness Test (grade 1) and the California Achievement Test Battery (grades 2 and 3) were used to provide achievement measures on a pre- and posttest design.

There were some significant differences among subtest mean scores for pupils with Follow-Through experience and pupils without Follow-Through experience. For example, a significant value of t was found for Follow-Through and non-Follow-Through participants on mean scores of the Arithmetic Fundamentals subtest on the Spring testings of the California Achievement Test.

A significant difference was also found on Spring testing means for the Total Arithmetic subtest of the California Achievement Test. The t value was -2.28. The mean scores on the Spelling subtest of the Spring testing produced a significant difference value of t as did the Total Language subtest means score and the Total Battery mean score. These values were -2.28, -2.83, and -2.28, respectively.

The Word Meaning section of the Metropolitan Readiness Test produced a significant difference value of t for the pupils with Follow-Through experience and pupils without Follow-Through experience. This t value was 3.02.

When an analysis was made of the achievement variables for pupils with and without Follow-Through experience holding Head Start experience constant, it was found that certain significant differences did occur. These data show that significantly different mean scores existed on the Spelling subtest of the California Achievement Test for the Spring testings and the Arithmetic Reasoning subtest for the Spring testing. No subtests of the Fall testing of the California Achievement Test produced significantly different mean scores. The Word Meaning subtest of the Metropolitan Readiness test produced a significantly different mean score. The t value was 2.14.

There were some significant differences in the achievement on selected subtests of the California Achievement Test and the Metropolitan Readiness Test for non-Head Start pupils with Follow-Through experience and those non-Head Start pupils without Follow-Through experience. These data show that significant differences existed in the mean scores of non-Head Start pupils with and without Follow-Through experience on two subtests of the California Achievement Test. These subtests were Total Arithmetic and Spelling. These t -values were -2.13 and -2.10.

55. Taylor, Vera Cook. An Evaluation of Three Compensatory Education Kindergarten Programs. University of Southern California, 1970. 163p. Adviser: Professor Magary. 70-25,069.

Three compensatory kindergarten programs implemented in eighteen classrooms in Fresno, California, were evaluated in terms of individual testing of 280 children. The children were from low income families and were largely Mexican-American and Negro. Children with preschool experience and without such experience were enrolled in each classroom. The children were pretested and posttested on: the Wechsler Preschool and Primary Scale of Intelligence (WPPSI), four subtests; the Caldwell Preschool Inventory (PSI), four subtests; the C test for Concept Formation; and a test for Innovative Behavior. The affective objectives of the programs were not measured.

The three programs compared were: the Follow-Through program based on the experimental Nimnicht Responsive Environment Model; the Keep-Up program enriched by the District with materials, personnel, and training; and the traditional District program which served as a control group. The programs were assigned to eight school sites matched by area, income level, and ethnic composition.

Research hypotheses projected the superiority of the Follow-Through methodology, variation between classrooms within methods, differences between children having and those lacking preschool experiences, differences between ethnic groups, differences between sexes, and the identification of some interactions of these variables. The research design nested classrooms within programs to provide for the examination of classroom differences. A second design was a factorial analysis with covariates of program and ethnic identification. A significance level of .01 or less was utilized to establish reliability. Significance of .05 was reported but judged marginal.

Research findings indicated that the Follow-Through children had the lowest pretest mean of the three groups of children. Using pretest-posttest results, the WPPSI indicated significant differences between the three programs. The children in the Keep-Up program evidenced higher pretest and posttest means, but the children in the Follow-Through program made the greatest gains. Since true randomization of the sample was not possible within the District, pretest-posttest comparisons between matched individuals were utilized to evaluate the possible influences of low pretests. These comparisons supported the gain reflected through Follow-Through programs as true gains. Significant differences between Mexican-American and Negro children were not established. Boys performed significantly higher than girls on all WPPSI tests. No significant differences were established between children who had had preschool and those who had no preschool experience. It was impossible within the sample size to compare gradated amount of preschool experience and also nest the classroom variable.

Significant differences between classrooms within each program were established, substantiating the need to examine the multiple factors confounded within this variable. The overall significant difference in program would support the superiority of the Keep-Up program to the traditional District program, and would support Follow-Through as the program related to the largest gains for all children on the measures utilized.

56. Thursby, Marilyn Pearcy. Effects of Head Start and Follow Through on Dependency Striving, Dependency Conflict, and Autonomous Achievement Striving. Duke University, 1970. 232p. Adviser: Robert L. Spaulding. 71-21,555.

The objective of the study was to examine the effect of variation in length of preschool experience on selected behavior patterns in first grade disadvantaged children. Measures and predictions of dependency striving, dependency conflict, and autonomous achievement striving in first grade were derived from the research of E. Kuno Beller. Whereas Beller employed rating scales completed by teachers to assess personality-related behavior patterns in young children, data in this study were collected by nonparticipant observers using the "Coping Analysis Schedule for Educational Settings" (CASES).

Three groups of first grade children were observed: Group I included twenty-eight Follow Through children who had had a year of E.S.E.A. kindergarten prior to first grade; Group II included fifty-nine Follow Through children who had participated in summer Head Start prior to first grade; and Group III included forty-nine children who were enrolled in regular first grade classes and who had had no preschool experience. One-way analysis of variance procedures for two samples at a time were used to test for differences between sex subgroups of the three treatment groups. F-tests were also used to determine whether or not significant fall-to-spring behavioral

changes occurred in any subgroup. Separate tests were performed for behavior observed during reading and arithmetic instruction.

The results included a large number of highly significant differences. However, they did not provide consistent support for the proposition (derived from Beller's work) that the greater the time a child had spent in a compensatory preschool program, the higher would be his levels of dependency striving and autonomous achievement striving, and the lower his level of dependency conflict. Neither did the results substantiate the prediction that Follow Through and an associated teacher behavior modification program would further differentiate behavior observed in the three treatment groups in the same directions which had been predicted on the basis of Beller's research.

Possible contributions to the obtained differences of a number of variables which had not been subject to experimental control were discussed. A major source of variation within treatment groups was hypothesized as setting and teacher effects. The manner in which a teacher structured the instructional activity, and the consequent behavioral implications for the children who were participating in the activity appeared to exert a major influence upon the observed behavior patterns of children. The sensitivity of the CASES observational instrument to differences in behavior patterning by activity and by class indicates its potential usefulness as a research instrument and as a teacher-training device.

57. Tocco, Thomas S. A Mapping of Parent-Child Self-Concept Transmission in Florida Model Follow Through Participants. The University of Florida, 1970. 87p. Adviser: Dr. Charles M. Bridges, Jr. 71-13,463.

Self-concept measures were taken on 323 Florida Model Follow Through kindergarten and first-grade children and their mothers at the beginning of the 1968-69 school year (pre measures) and at the end of the school year (post measures). The Children's Self-Social Constructs Test was used to assess the children's self-concepts. The How I See Myself Scale and the Social Reaction Inventory were used to assess the mothers' self-concepts. The set of children's pre measures was correlated with the set of mothers' pre measures, using the canonical correlation analysis. Two of the possible canonical R's were statistically significant, one (.334) beyond the .005 level and the other (.317) beyond the .05 level. The set of mothers' pre measures was correlated with the set of children's difference (post minus pre) measures using the same analytical methodology. One of the possible canonical R's (.307) was statistically significant beyond the .05 level. Both sets of difference measures were similarly analyzed; however, no statistically significant R's emerged.

Both sets of pre measures, mothers' and children's, were factor analyzed in an attempt to identify factors having both children and mother measures with high loadings. The hypothesized between-set loadings on factors did not materialize. The same analysis was carried out on the combined set of mothers' pre measures and children's difference measures.

Factors having high loading mother and children measures did not materialize as hypothesized. Similar results were obtained on factor analyses of the combined set of mothers' and children's difference measures.

The two conclusions made as a result of this study were based upon the two statistically significant results. These were: 1) Mothers' self-concept measures are related to children's self-concept measures, and 2) Mothers' self-concept measures taken at the beginning of the school year are related to change in children's self-concept measures over the course of the school year. It should be noted that the variance accounted for in both relationships stated above was small, approximately ten per cent. Further, this ten per cent figure is an inflated one due to the maximizing nature of the canonical correlation methodology.

58. Bennett, LaVerne Richardson. A Study of the Effects of a Two-Year Follow Through Program on the Academic Achievement of Second Grade Pupils. Northwestern State University of Louisiana, 1971. 96p.
Adviser: Professor Bob G. Lumpkins. 71-29,286.

The purpose of this study was to determine the effectiveness of the Follow Through program in helping disadvantaged children to retain the gains which were achieved under project Head Start. A secondary purpose was to determine the effectiveness of the Follow Through program in reducing absences among participating pupils.

One hundred sixty-nine second grade pupils participated in the study in the analysis of achievement. Eighty-nine pupils, 49 blacks (27 male and 22 female) and 40 whites (21 male and 19 female) participated in a two-year Follow Through program. Eighty pupils, 46 blacks (22 male and 24 female) and 34 whites (16 male and 18 female) participated in a regular public school program for two years. All pupils participated in a nine-month, Title I, ESEA kindergarten program before entering the first grade. One hundred ninety-four pupils, 99 Follow Through pupils and 95 non-Follow Through pupils, participate in the analysis of absences.

Scores from the Metropolitan Readiness Test, administered at the end of kindergarten, were analyzed by t-test, and analysis revealed no statistically significant difference between the Follow Through and non-Follow Through readiness scores. Analysis of variance employing two Lindquist Type III designs was used to analyze T score means from the Stanford Achievement Test, which was administered both in the fall of 1970 and the spring of 1971. Variables tested in the study were achievement pretest and posttest mean scores for black and white, male and female, Follow Through and non-Follow Through pupils.

The following results of the research reached statistical significance. Follow Through pupils attained a higher achievement mean score on the posttest and made greater academic gains during the school year than did non-Follow Through pupils. Follow Through black pupils made a higher posttest mean score and greater academic gains than did white Follow Through pupils. Non-Follow Through white pupils began the year with a higher achievement mean score than did Follow

Through white pupils. Furthermore, non-Follow Through white pupils both began and ended the year with higher achievement mean scores than did black non-Follow Through pupils. Females attained higher achievement mean scores on both the pretest and posttest than did the males.

Data concerning absences, analyzed by Chi-Square, indicated that Follow Through pupils accumulated a statistically significant lower proportion of absences than did the non-Follow Through pupils. However, the statistically significant difference in the proportion of absences was caused by the accumulation of fewer absences of the black Follow Through pupils. Little difference was noted between the proportion of absences of white Follow Through pupils, white non-Follow Through pupils, or black non-Follow Through pupils.

The data of this study support the following conclusions:

1. The Follow Through program was effective in helping participating pupils to maintain and increase gains achieved in Head Start.
2. The Follow Through program was particularly effective with black pupils.
3. The Follow Through program was effective in reducing absences in black pupils.
4. Sex was not a statistically significant variable in academic achievement in the Follow Through program.
5. The Follow Through program appears to be worth the extra cost involved.

59. O'Piela, Joan Marie. Identification of Predictor Variables of Success in First Grade Reading in Culturally Disadvantaged Inner-City Children Who Have Had a Preschool Experience. Wayne State University, 1971. 158p. Adviser: James Blake. 72-14,607.

An attempt was made in this study to compare the effectiveness of certain predictor variables which could be used to predict a pupil's success in reading in the first year after the preschool experience.

A population of one hundred and three children participating in the Detroit Follow Through Project were tested on a battery of six instruments: 1) Peabody Picture Vocabulary Test; 2) Anton Brenner Developmental Gestalt Test of School Readiness; 3) Murphy-Durrell Reading Readiness Analysis; 4) Screening Test of Academic Readiness; 5) California Short-Form Test of Mental Maturity; 6) Preschool Attainment Record. The criterion measures were two subtests of the California Reading Test, Form W (1963): Reading Vocabulary and Reading Comprehension.

The data were submitted to three series of analyses. Pearson product moment correlation coefficients were calculated among the variables to determine the relationships among the tests administered during the period of data collection. To determine an optimum predictive battery, multiple regression analyses were a second form of analysis. Data were subjected to the Shape-Type Criteria of Profile Analysis developed by Lindsey to isolate and cluster students

with like-type data records.

The data in this study revealed that there are differences in the identification of the highest single predictors of success in reading for boys and for girls when the criterion in a subtest of the California Reading Test. When the criterion variable is the Reading Vocabulary subtest of the California Reading Test, the total raw score of the Murphy-Durrell Reading Readiness Analysis was the highest single predictor variable for boys with a correlation coefficient of $r=.797$. On the same criterion variable, data revealed that for girls the Letter Names subtest of the Murphy-Durrell Reading Readiness Analysis was the highest single predictor variable with an $r=.542$.

On the second criterion variable, the Reading Comprehension subtest of the California Reading Test, data revealed that for boys the total raw score of the Murphy-Durrell Reading Readiness Analysis was the highest single predictive variable with a correlation coefficient of $r=.565$. For the girls on the same criterion variable, the total raw score of the Peabody Picture Vocabulary Test, administered as a pretest at the end of kindergarten, was the highest single predictive variable with a correlation coefficient of $r=.521$.

When the multiple regression analysis was computed for all subjects as a total group, the Letter Names subtest of the Murphy-Durrell Reading Readiness Analysis was the highest single predictive variable. A correlation coefficient of $r=.650$ was reported when performance on the Reading Vocabulary subtest was the criterion test. The total raw score of the Murphy Durrell Reading Readiness Analysis was the highest single predictor variable with a correlation coefficient of $r=.430$ when the Reading Comprehension subtest of the California Reading Test was used as the criterion variable.

The technique of Shape-Type Criteria of Profile Analysis is a practical and reliable technique for clustering similar individuals providing a means to describe the profiles of children who may be classified as successful readers at the end of the first grade and children who may not be classified as successful readers at the end of the first grade.

The use of Shape-Type Criteria of Profiles isolated and clustered the students in the population into eight distinct and different profile types based upon complete data records. These groupings of profile types revealed significant centroid profiles for each type of achiever in reading; High, Average, and Low.

60. Phillips, Clyde K., Jr. A Comparative Study of the Effects of a Head Start Follow Through Program and a Kindergarten Program Upon the Cognitive Abilities and Self Concepts of Children from Low Socio-Economic Environments. The University of Oklahoma, 1971. 89p.
Adviser: Gene D. Shepherd. 72-3426.

The study was designed to compare the development of cognitive abilities and self concepts of pupils who participated in a Head Start

Follow Through program as compared to those pupils who participated in a kindergarten program. The Follow Through subjects were selected randomly from the population that had been enrolled in a nine month Head Start Program. The hypotheses were: (1) There was no significant difference in the gains on the Cognitive Abilities Test between the control and experimental groups after completing the model Follow Through program; (2) there was no significant difference in the gains of self concepts between the control and experimental groups after completing the model Follow Through program; (3) there was no significant difference in the gains on the Deviation Intelligence Quotient between the control and experimental groups after completing the model Follow Through program. A subsidiary hypothesis was: There was no significant difference in the self concept gains between the experimental and control groups attributable to the race of the teachers. Comparisons were made of data obtained from the Cognitive Abilities Test, the California Test of Personality, and Cognitive Abilities Test Deviation Intelligence Quotient.

The first hypothesis used data from the Cognitive Abilities Test. The results indicated no significant difference between the mean gain in scores made by the subjects who had six months of Follow Through experiences and those subjects who did not have six months of Follow Through experiences.

The performance on the "Personal Worth" subtest of the California Test of Personality indicated no significant difference between the mean gain in scores made by the subjects who had six months of Follow Through experiences and those subjects who did not have six months of Follow Through experiences.

The third hypothesis compared Deviation Intelligence Quotient data for both groups on the Cognitive Abilities Test. The results indicated there were no significant differences between the mean gain in scores made by the subjects who had six months of Follow Through experiences and those subjects who did not have six months of Follow Through experiences.

The fourth (subsidiary) hypothesis, using data from the California Test of Personality, revealed the absence of any significant difference in self concept gain attributable to the race of the teachers only when posttest performances were compared.

Conclusions:

1. The difference in gains made by Head Start Follow Through and Head Start Non Follow Through showed no statistical difference on the California Test of Personality and the Cognitive Abilities Test. It was therefore concluded from this that pupils who had Head Start experience do as well in a regular classroom program as those pupils with Head Start experience and a special Follow Through classroom program.

2. The study revealed that the regular kindergarten program was as effective as the Follow Through program. It was therefore concluded on the basis of the findings that the regular kindergarten program should be retained as the basic program utilized by the school system.

61. Russo, Joseph Alva. Learning and Behavior Patterns of Follow Through Students Associated with Parent-Teacher Attitudinal Congruence.
University of Utah, 1972. 160p. Adviser: Dr. Reed Merrill.
72-16,051.

A plethora of research has been conducted in an effort to relate certain teacher and parent behaviors to the scholastic behaviors of pupils; however, an assessment of the learning climate created by all of the significant educational role groups in a pupil's learning environment has received very little empirical attention. The primary objective of this study was to investigate the relationship between the degree of attitudinal congruence among the significant educational role groups in a Follow Through pupil's learning environment--parents, teachers and classroom assistants--pupil achievement, mental ability, absenteeism and referral frequency for learning and behavioral difficulties. A secondary objective was to study the impact of inservice training procedures with teachers and classroom assistants and parent involvement activities on the educational attitudes of these role groups. These attitudes were measured by the Responsive Environment Attitude Scale (REAS), which was developed by the investigator for use in this study. The items on the REAS were rationally derived and empirically tested to yield a unifactor measure of responsive attitudes, involving a belief in and preference for responsive, student-centered educational values and methods at one extreme and directive, teacher-centered values and methods at the other extreme.

Attitudinal congruence was determined by comparing the ranges of total REAS scores of the teachers, classroom assistants and parents of the pupils used in this study. REAS difference scores were obtained by administering this scale to these role groups at the beginning and end of the school year, and used as indices of attitude change.

Chronbach and Meehl's model was used in evaluating the construct validity of the REAS. Two tests of predicted-group differences provided substantial support for the construct validity of this attitude scale. In addition, a preliminary study of the scale's internal structure culled out those items that failed to differentiate in the direction of the total scale. However, an assessment of the scale's convergent validity, using the multitrait-multimethod matrix, did not yield significant results for either teachers or paraprofessional classroom assistants. The relative magnitudes of the obtained correlations provided some evidence of discriminant validity; however, in order for this to provide convincing evidence of the scale's construct validity, significant convergent validity coefficients are needed. On the basis of these data, it was concluded that a sufficient degree of construct validity was established to justify the use of the REAS in testing the hypotheses of this study.

Two of the hypotheses under investigation predicted that inservice training procedures would have a differential impact on the attitudes of teachers (Hypothesis 1) and assistants (Hypothesis 2) with varying amounts of previous work experience in Follow Through. It was further predicted (Hypothesis 3) that parent involvement activities would

have a differential impact on the ... parents who differed in the number of times that they ... the program. None of these hypotheses were significant by the data.

The next four hypotheses pertained to the relationship between role-group attitudinal congruence and student scholastic behavior. The results indicated no significant differences in the achievement test scores, mental ability estimates, sentence marks and referrals among those children whose role groups demonstrated the highest degree of congruence in their REAS scores, those role groups demonstrated the lowest degree of congruence and control group of Follow Through pupils whose parents did not volunteer to complete the REAS.

It was concluded that the hypotheses advanced relative to the scholastic behavior of Follow Through pupils and the attitude change of significant adults in their learning environment were not supported by these data. A model for the organization of future research in this area was proposed.

Language--Black Dialect

62. Ryckman, David Bertrand. Psychological Processes of Disadvantaged Children. University of Illinois, 1966. 137p. 66-12,417.

This study was designed to examine the nature of the relationship between social class and cognitive abilities of Negro kindergarten boys. The conceptual framework under which the study was developed is called "information processing." The study was designed to assess specific abilities and disabilities of lower class boys as well as to examine for unique patterns of cognitive abilities.

The sample consisted of 50 middle class and 50 lower class Negro kindergarten boys in a large midwestern city. All children were between the ages of four years eleven months and five years eleven months. An extensive battery of tests designed to assess specific information processing abilities was individually administered to each boy. In all, eight instruments were used.

Nineteen variables were submitted to a Principal Component analysis with a varimax rotation. Component scores were computed for each individual. The statistical analysis of the data revealed the following:

1. All eighteen cognitive variables discriminated between the groups in favor of middle class boys ($p < .01$).

2. The component analysis produced five relatively distinct and meaningful components. They were labeled as follows:

Component I--General Language Ability

Component II--Structural Organization

Component III--Visual Imagery

Component IV--Visual Classification

Component V--Chronological Age

Component I accounted for almost twice as much of the variance as the second largest component.

3. For the "t" tests for differences between the means, Components I and IV produced significant differences in favor of the middle class group ($p < .01$). On Components II and III, the middle class group was superior to the lower class group ($p < .10$).

4. Examination of the overlap of class medians revealed that on Component I only 16 percent of the lower class boys exceeded the median of the middle class and only 20 percent of the middle class boys fell below the lower class median.

The evidence from this study suggests that the major differentiating characteristic between middle and lower class children is general language ability. This conclusion is based on the fact that Component I accounted for the largest amount of variance, produced the largest mean difference between the groups and had the highest correlation with social class. The ability to label or classify, Component II, was the second most discriminating component.

These findings have implications for an educational definition of cultural deprivation. Previously, cultural deprivation has been defined in terms of socioeconomic variables which have limited value for educational purposes. Since it appears that general language ability is

the most differentiating characteristic between the class groups, cultural deprivation is essentially language deprivation. Definitions based on language variables would describe the nature of the educational problem.

If cultural deprivation is defined in terms of language variables, educational diagnosis should include measures of language ability.

It appears that diagnosis should attempt to assess language usage rather than mere quantity of vocabulary or language production.

The breakdown in language functioning seems to be in terms of ability to use language for obtaining or transmitting information.

The major implications of this study have to do with program planning for preschool and kindergarten. Since general language ability is the major differentiating characteristic between class groups and is a central element for information processing, it appears highly essential to give language training a central place in the program framework. The realities of the need for efficiency and effectiveness in programs were discussed. It is suggested that the core of a program for the culturally deprived should be language and that structure is needed for effective teaching.

63. Peña, Alvar Antonio. A Comparative Study of Selected Syntactical Structures of the Oral Language Status in Spanish and English of Disadvantaged First-Grade Spanish-Speaking Children. The University of Texas, 1967. 152p. Adviser: Thomas D. Horn and Joseph Michel. 68-4327.

This study was designed to investigate the status of some basic syntactical structures of the oral language development that disadvantaged first-grade Spanish-speaking children possess in Spanish and English. Specifically, this study consisted of an intensive comparative analysis of selected basic sentence patterns and transformations in Spanish and English manifested in the responses of the subjects at the beginning and at the end of the first grade. An ancillary task of the investigation was to field-test the first section of the Language-Cognition Test (Spontaneous Language). This section of the test purported to measure the status of oral language development through a linguistic analysis of the selected basic sentence patterns and transformations present in the oral response of primary grade children. The hypotheses for this study were designed to test for similarities and differences that would be present in the oral language, Spanish and English, of four experimental teaching groups (OAS, OAE, NOA, NOA-NS) made up of disadvantaged first-grade Spanish-speaking children. In the four experimental teaching groups, two (OAS and OAE) received intensive oral instruction in Spanish and English, using science-based materials, for one hour a day; one group (NOA) received no intensive oral instruction but used the science-based materials; and the last group (NOA-NS) used neither the intensive oral instruction nor the science-based materials, but did follow the regular program prescribed by the San Antonio Independent School District.

The subjects for this study were chosen in the fall of 1966 from five of nine elementary schools in the San Antonio Independent School District, San Antonio, Texas, participating in The University of Texas Language Research Project. The pupils were randomly selected from twenty-three first-grade classrooms with an equal number assigned to each treatment. None of the students had had any previous first-grade instruction prior to entering school. The original sample consisted of eighty-eight students. Owing to pupil attrition, the sample on which the final analyses were performed consisted of sixty-four subjects.

The methods and procedures for this study were divided into three phases. In the first phase, the evidence of syntactical structures manifested in the oral language of the four groups at the pre-testing phase was secured by tape recordings and factor-analyzed. The second phase, post-testing consisted of data secured from the groups after each group had been instructed for one academic year according to its own designated treatment. The third phase consisted of obtaining the comparative data on which to test the general hypothesis (that there were no significant differences between group means as a function of treatment).

In general, the hypotheses constructed for this investigation were supported by the results. It would appear from the evidence secured, that regardless of the treatment used the results as measured by the Language-Cognition Test, were essentially the same, i.e., that there were no significant differences in the language used by the four groups under investigation. Each group, nevertheless, manifested oral usage, in varying degrees, of the basic sentences and transformations in both languages. Additionally, it was evident that the first section of the Language-Cognition Test did yield evidence of oral language as it purported to do.

64. Kirk, Girvin Eaton. The Performance of Advantaged and Disadvantaged Preschool Children on Tests of Picture-Phonemic Discrimination and Picture-Word Recognition Skills. University of Illinois, 1969.
79p. 69-15,336.

An inventory was conducted on the picture-phonemic discrimination and picture-word recognition testing skills of three groups of preschool children with a mean CA of 46 months. Fourteen advantaged white children from standard language homes (Group 1), ten disadvantaged Negro children from non-standard language homes with a history of infant-preschool structured language experience (Group 2), and ten non-tutored disadvantaged Negro children from non-standard language homes (Group 3) were administered four picture-word type tests: (a) Peabody Picture Vocabulary Test (PPVT); (b) Picture-Word Test Entrance Skill Inventory (PWTESI) a picture-word screening test, (c) Picture-Phonemic Discrimination Test (PPDT) designed by Seidel (Picture Identification for Children--A Standard Index) and containing 174 picture-

word test items placed in triplets on a single page in minimal speech sound discrimination contrast, and (d) a Picture-Word Recognition Inventory (PWRI) that contained the 174 PPDT test items redistributed to a non-minimal phonemic discrimination contrast position.

The estimated PPVT IQ for Group 1, Group 2, and Group 3 were 113.50, 99.90, and 60.10, respectively. The mean IQ of Group 2 are the highest PPVT scores for similar age lower-lower class Negro children reported in the literature; the mean approximates the performance of similar age "average" white children in the PPVT preschool standardization population. The low estimated PPVT IQ score for Group 3 reflects the performance of a sample of lower-lower class disadvantaged preschool children, who had not participated in a remedial language program. It was noted that less than one percent of the approximately 300 preschool children used in the PPVT standardization population received a test IQ score as low or lower. Consequently, one might be led to assume, when interpreting the PPVT results, that the poor performance by the Group 3 subjects reflects a basic deficiency in the type of language related skills required for picture-vocabulary recognition-performance.

All subjects were able to demonstrate facility with the basic picture-word test entrance skills on the PWESI. Group 1 demonstrated the greatest picture-word recognition skill by identifying 93 percent of the 174 picture-word items on the PWRI; Group 2 identified 83 percent; Group 3 identified the lowest number of test items with a mean score of 43 percent. While the standard deviation (S.D.) scores were relatively low for Group 1 and Group 2 subjects, the S.D. score was over four times larger for the Group 3 subjects. Similarly, Group 1 demonstrated the greatest picture-phonemic discrimination skill performance by identifying 90 percent of the 174 PPDT test items. Group 2 ranked second by identifying 80 percent and Group 3 again obtained the lowest group score with a mean of 43 percent. A wide test performance variation was again characteristic of the disadvantaged children in Group 3.

A corrected phonemic discrimination index score was devised to partly remove the contamination of picture-word recognition from the phonemic discrimination test score. The results of this procedure raised the phonemic discrimination score for each group and served to point out the necessity to further control the picture-word familiarity variable in subsequent research in order to assure that the assessment of the auditory modality remains uncontaminated by extraneous and confounding variables included in the phonemic discrimination tests.

As a result of the similar test performance by the disadvantaged subjects on the PWRI and PPDT, it was suggested that the so-called "auditory discrimination" deficiency of disadvantaged children needs to be restudied.

65. Johnson, Dora Kennedy. An Investigation of the Oral Language and Oral Reading of Black First Grade Children. The Ohio State University, 1970. 125p. Adviser: Professor Viola M. Cassidy. 71-18,028.

Oral language and family economic level have been designated as factors in reading acquisition. This study sought to determine the oral language style and oral reading skill of black first grade children in Macon County, Alabama.

The 1969-70 first grade enrollment of the Macon County Public School System was screened to procure the sample for this study. The Goode-nough Draw-A-Man was used to establish IQ; the Huelsman Word Recognition and Word Discrimination Tests were used to establish word identification ability; the OEO Poverty Guidelines were used to establish family economic status; and a Personal Data Card was used to record other information relevant to the investigation.

Sixty-four black first graders equally divided according to sex and family economic level (poverty or nonpoverty) were selected as the subjects for this study. All subjects were above the intellectual level designated as "mentally retarded" by most authorities.

Language samples for each subject were taped, transcribed, and analyzed for presence of distinctive features of black English as defined in the literature. Seven distinctive features of black dialect were found in 50% or more of the language samples. These features were: absence of -s present tense marker, absence of -ed part tense marker, habitual 'be' copual absence, absence of -s plural, usage of 'd' instead of initial 'th', and other nonstandard verb usage.

Proportional usage of each selected feature was calculated and a total proportion of black dialect usage was generated for each subject. The total proportional usages of black dialect produced a continuum which was labeled "An impressionistic Density Index of Black Dialect Usage."

The Grammatic Closure Test of the Illinois Test of Psycho-linguistic Abilities and the framework designed by Berko to determine formation of morphological structures were used to gather additional evidence of oral language style. Percentages of black and standard English usage were generated from responses to these two instruments.

Oral reading ability was established by performance on Form C of the Gilmore Oral Reading Paragraphs and performance on parallel sets of dialectual and standard reading paragraphs constructed by the investigator.

The findings revealed significant differences between density of black dialect usage for poverty and nonpoverty subjects. Poverty level subjects generally had higher density levels of black English usage. However all subjects used one or more distinctive features of black English in their oral language.

The subjects from nonpoverty families read both standard and dialectal materials significantly better than the poverty level subjects. There was a highly significant inverse association between density level of black dialect usage and oral reading ability for the nonpoverty group but not for the poverty group.

66. Jones, Katherine Imogene Burnside. The Effect of an Immediate Intervention Program for Inner-City Four-Year-Olds. University of Miami, 1970. 121p. Adviser: Dr. Alma W. David. 70-18,165.

Recent research regarding young children has shown that many five-year old children arrive at kindergarten with a learning deficit of about two years; therefore, this study attempted to measure the effects of an immediate intervention program of four months in oral language and concept development, motor skills and self-image improvement for 350 Negro four-year olds from an inner city community in Gary, Indiana, to see if they could enter kindergarten more ready to use language, perform motor skills and operate successfully in group and individual learning situations. The program was planned by the Gary staff, parent advisory groups and financed through Title III ESEA funds.

To test the effectiveness of the semi-structured program, a pre and post battery of six standardized tests was administered to a randomized sample of children in the Early Learning Center and a control population of children from Carver, a nearby school where children had no pre-kindergarten schooling. These tests included: Educational Testing Service Pre-School Inventory by Caldwell; Engelmann Basic Concept Inventory; Beery Developmental Test of Visual-Motor Integration; Primary Academic Sentiment Scale; and Thomas Self-Concept Values Test. In addition, the Stanford-Binet Intelligence Test was administered to the experimental sample. The pre and post test scores were transformed into Delta scores, based on Lacey's linear regression model in order to remove the effects of pre-scores on post test data. The Delta scores were treated for an overall test on within-subject effects by use of Hotelling's T^2 test for the equality of means.

Children in the experimental group attended the Early Learning Center, a portable facility constructed for the program, for a three-hour session where a teacher, classroom aide, and volunteer or bus aide met them in small groups which rotated every fifteen minutes for a forty-five minute period. The children were given direct structured learning experience in oral language and concept development. This period was followed by play activity, gross motor skill development, and other more creative nursery school activities for the remaining time. Snack period and an immunization program attended physical needs. The teacher and aides met two groups of children per day.

Parents were involved in each stage of planning, and teachers visited homes for initial testing and to help parents learn about activities that would complement the school program and their child's language growth.

Statistical analysis of the test data revealed gains significant at .01 level in the cognitive and visual motor areas. While the change was not significant as measured by the instruments in the area of self-concept, motivation for learning was significantly increased. The experimental group showed more growth than the control group on all

instruments. Statistically significant IQ gains were noted with the greatest change in the experimental group of children scoring below average at the start of the program.

Conclusion: The program was successful in reaching two of the three major goals in reducing the learning deficit for children, notably those scoring below 100 on the Stanford-Binet IQ Test. Sufficient gains were made to warrant recommending this program to other communities in need of solving some of the learning deficits which children from lower socioeconomic backgrounds often bring to the kindergarten classroom.

67. Rice, Donald Benjamin. A Comparison of the Aural Comprehension and Oral Language Expression Skills of Middle Class and Inner City Negro Children. Indiana University, 1970. 129p. Adviser: Samuel L. Guskin. 71-11,410.

The language style of young Negro children is commonly characterized as nonstandard Negro English. This language style has been subjected to considerable study. Early studies of this language style led to the development of a deficit theory, indicating that nonstandard Negro English constituted a type of sub-dialect of standard English. Many questions were raised concerning the ability of Negro children to understand and learn from standard English presentations. Recent studies indicate that nonstandard Negro English represents a well developed, functional language style, serving well the communication needs of persons who develop this language-style within their social milieu. There is further recent evidence which suggests that these children understand standard English presentations, even when they are unable to use this style in oral expression.

This study was designed to further explore the young Negro child's ability to comprehend and respond meaningfully to standard English materials. The study investigated the ability of these children to restructure or paraphrase short stories and to answer comprehension questions concerning specific information presented in the stories. The study also attempted to improve oral language expression and comprehension through brief instruction concerning the act of paraphrasing. Finally, the study compared the language skills of inner city Negro children with that of their age peers living in a middle class environment.

Reading selections from the SRA Reading Laboratory, grade level 1.2, and the Spache Diagnostic Reading Scales, grade level 1.6, provided the materials used in the study. Each of the 10 stories contained six factual statements and was followed by six comprehension questions. The stories were read to each subject, using a standard English style of presentation. The subject was then asked to retell the story. The retelling was followed by the six comprehension questions. Ability to paraphrase was measured by a count of the meaningful words used by the subject in retelling the stories. Comprehension was measured through a count of the number of factual statements the subject included in retelling and by the number of comprehension questions the

child answered correctly. Three groups of subjects participated in the experiment. All the subjects were in the fifth or sixth month of their initial kindergarten experience. The subject responses were tape recorded and transcribed verbatim. The transcriptions were typed, using code numbers for subject identification and scored after the experiment was completed. A total of 90 subjects made up the three groups studied. The experimental population consisted of one group of inner city subjects and one group of middle class subjects. The third group constituted an inner city control group. The experimental groups participated in two testing sessions. For these two sessions, the 10 stories were randomly placed into two story groups of five stories each. The second session was designed to provide instruction concerning paraphrasing. The control group did not receive this instruction. This study indicated that young children who use nonstandard Negro English were able to comprehend and respond meaningfully to standard English textbook type materials presented in story form. There was also evidence indicating that the subjects improved in comprehension as a result of the experimental procedure. The study found significant differences between the language abilities of the inner city and middle class subjects. Finally, the study showed that marked language ability differences occurred within the groups studied.

68. Ramsey, Katherine Imogene. A Comparison of First Grade Negro Dialect Speakers' Comprehension of Material Presented in Standard English and in Negro Dialect. Indiana University, 1970. 112p. Adviser: Dr. Ruth Gallant. 70-25,215.

Within the past decade a number of educators and linguists have said that the reading problems of Negro dialect speaking children stem in part from their inability to understand English. Two suggested ways of reducing the dialect speakers reading problems have been the development of reading instructional materials in dialect and the use of dialect by teachers of these children. This study was designed to compare Negro dialect speaking beginning first graders' comprehension of material presented in standard English and in Negro dialect.

Since subjects were beginning first graders, two listening tasks were developed to check comprehension. Four short fables which were judged by an authority in children's literature to be appropriate and free of cultural bias were used in the development of the comprehension tasks. In the first task, subjects listened to two stories and answered questions which checked literal comprehension. In the second task, subjects listened to and retold two additional stories. Negro dialect translations which were made of the four stories and the questions used in the listening tasks were evaluated and approved by a Negro linguist. Two recordings of the stories and questions, one in standard English and one in Negro dialect, were taped by a bidialectal Negro woman. The recordings were also checked and approved by the linguist.

Subjects for the study were thirty boys and thirty girls from three Title I schools in the ghetto area of Gary, Indiana. After all beginning first graders in the three schools were stratified as male and female and as high, average, and low according to Metropolitan Reading Readiness Test scores, subjects were randomly selected from the six categories and assigned to the standard English or the Negro dialect treatment.

After being screened for non-dialect speakers, subjects were presented the listening tasks individually. Responses to the questions and the retelling of the stories were taped and transcribed for analysis. Answers to questions were tabulated for the six groups. Subjects' retelling of the stories were analyzed to determine the number of accurate literal, interpretive and evaluative statements made by subjects in each category. Analysis of variance was used to determine whether readiness, sex, and treatment had significant influence on subjects' performance of the tasks.

Analysis of treatment data showed a statistically significant difference at the .01 level in the number of literal statements made by subjects as they retold stories. Subjects receiving the standard English treatment were the higher scorers. Readiness was found to be statistically significant at the .01 level in analysis of subjects' responses on the question-answer activity. High and average readiness groups were favored. Sex was statistically significant at the .01 level in the question-answer task and at the .05 level when analysis for interpretive statements was made. Boys were favored in both analyses.

Results of this research do not indicate the value of producing materials in Negro dialect for beginning reading instruction of Negro dialect speaking children. Neither does the contention of some educators and linguists that teachers of Negro dialect speaking children will find speaking Negro dialect beneficial find support.

69. Roberts, Betty Jane. The Effects of Structured Language Training on the Reading Readiness and Reading Achievement Scores of a Group of Disadvantaged First-Grade Children. University of Alabama, 1970. 134p. 71-9135.

The purpose of this study was to investigate whether a group of disadvantaged Negro children who had structured language training made greater gains in reading readiness and in reading achievement than a group who did not have such training.

The population consisted of all first-grade children in a racially-segregated elementary school in Tuscaloosa, Alabama. Thirty-three children were chosen for the experiment by randomization from a group of 66 children. Thirty-two of the 33 children participating in the study were tested the second week of school in September using the Peabody Picture Vocabulary Test (PPVT). The children were matched-paired on the basis of IQ scores from the PPVT. The matched pairs were randomly assigned to Group I or Group II, and were designated as Experimental and Control Groups, respectively, by using a random

numbers table. This selection method resulted in four boys and twelve girls being assigned to the Experimental Group; ten boys and six girls to the Control Group. One child with defective vision did not participate in the study.

The Experimental Group began 16 weeks of language training in the form of patterned language drills on October 7. The Control Group received equivalent time devoted to non-drill activities. The language training was conducted in the regular classroom. A schedule was arranged which permitted the Control Group to "visit" another classroom during the language training sessions, and for the Experimental Group to "visit" during the compensatory time with the Control Group.

Both groups were tested the second week of treatment and post-tested the tenth week of treatment using the Lee-Clark Reading Readiness Test. Both groups were tested again at the end of the sixteenth week of treatment and re-tested eight weeks after termination of treatment using the Lee-Clark Reading (Primer) Test, Forms A and B. All of these test scores were subjected to the Lindquist Type I analysis of variance.

The data obtained from applying the analysis of variance technique to the pre- and post-test scores of the Lee-Clark Reading Readiness Tests resulted in some significant F-ratios on the total scores and on some of the three sub-test scores. The F-ratios that were not significant were those which indicated differences that were attributable to factors other than treatment. Results of the t-tests indicated significant change in both groups in reading readiness. The Experimental Group showed more change ($<.0001$) between pre- and post-test scores than did the Control Group ($<.001$). It may be concluded, then, that both groups showed statistically significant gains in reading readiness, but the Experimental Group showed greater gains. The changes within the Experimental Group ($<.0001$) and the Control Group ($<.001$) were significant to a greater degree than the changes between groups ($<.1>.05$).

The Type I analysis of variance technique was applied to the reading (primer) scores on Forms A and B of both groups. The F-value obtained from the total scores between tests, 50.56, was statistically significant beyond the .001 level. The t-ratios indicated significant gains by both groups on the sub-tests. The Experimental Group showed more significant gains on the sub-tests, Visual Stimuli ($<.001$) and Following Directions ($<.001$), the two areas related to the actual reading process. The Control Group ($<.001$) showed greater significant change than the Experimental Group ($<.025$) on the sub-test, Auditory Stimuli.

The inferences drawn from these data were: (1) both groups showed statistically significant gains in reading readiness and reading achievement; (2) the Experimental Group which had received specific language instruction made gains, particularly in reading achievement; and (3) the difference between groups in interaction was not significant and seemed to be due to factors other than treatment. Although the results of this study did not indicate the superiority of structured language training, further investigation of this approach appears justifiable in view of the changes manifested by both groups.

70. Shands, Francis Jean Schelifeffer. Social Exchange and Language Training for Disadvantaged Children. Washington University, 1970.
325p. Adviser: Robert Hamblin. 70-26,880.

The hypotheses being tested were:

1. A combination of training in reading and oral language will increase the intelligence of low ability Negro ghetto disadvantaged children more than training in oral language alone.
2. The expected increases in intelligence above will be additionally increased by reinforcing correct language responses with contingent material reinforcement, according to the principles of social exchange theory.
3. There will be interaction between method and treatment producing highest IQ gains for those children having reading training plus contingent material reinforcement.

Thirty-six disadvantaged kindergarten children were trained in eight training groups for 15 minutes per day for four months. These eight groups comprised the two replications of the four cells in a 2×2 analysis of variance design. The residual gain scores were computed for each child and compared in the analysis of variance test.

Results: None of the hypotheses were supported by any of the post tests. The cell which produced the highest IQ scores was that with the reading training program combined with contingent material reinforcement according to social exchange principles are predicted. However, results were not significant.

The reason the hypotheses were not supported was attributed to what the experimenter did rather than to defects in the principles employed. Only the high ability children received the full benefit of the social exchange system. Due to over use of limitation, the lower ability children got little benefit. Also, because the groups were small and the experimenter had good rapport with the children, she got excellent results from training non-reinforcement groups (taking away from the potency of the effect of RF on the "with RF" groups). Training in reading might have shown more effects if the experimenter could have had more time to teach reading (total reading training was 7 hours).

Results of Supplementary Analysis: Fluid intelligence (Arthur Jensen's term) was increased more than crystallized intelligence. Fluid IQ was called "reasoning ability" which corresponded to tasks in Part I of the Otis test. Crystallized IQ was called "environmentally influenceable IQ" measured in Part II of the Otis test. The increase was borderline significant, $p < .11$.

The average net gain in IQ of the experimental children was 9 points above that of the control children on the Otis-Lennon test. Using DuBois' correlational analysis technique, all experimental children were compared to control children for all post tests (with pretests partialled out). The tests which showed a significant difference in favor of the experimental groups were: Otis-Lennon $p < .01$, Draw-A-Man $p < .02$, Metropolitan Readiness subtests: word meaning $p < .025$, listening $p < .025$, copying $p < .02$. The gains in IQ correlated with gains in arithmetic (metropolitan number test) $p < .005$. As no arithmetic was taught in the program, the correlation demonstrates the effects of transfer.

71. Wiggins, Antoinette Violet. A Study of Dialect Differences in the Speech of First Grade Negro Children in the Inner City Schools of Cleveland, Ohio. Indiana University, 1970. 154p. Adviser: Dr. Ruth G. Strickland. 71-11,356.

The basic objective of this research was to determine, by describing a sample of Negro children's speech-in the Cleveland Public School System, whether educators were justified in lumping together all Negro speech as "Negro Dialect" or whether there were wide variations within the inner city Negro community which educators should take into account when preparing reading materials. Specific problems related to this objective were:

1. To determine whether there were different speech forms within the inner-city Negro community that tended to use verb forms in ways that differed distinctly from standard English,
2. To determine whether they were sufficiently clear and consistent enough to form the basis for setting up appropriate reading materials for these children.

Thirty first grade Negro children were randomly selected from four inner city schools in the Cleveland, Ohio School System. These schools were located in various socioeconomic sections of the city. Fifteen of these children were from the above average reading group and 15 were from the below average reading group. Each child was personally interviewed and asked to respond to a set of questions for the purpose of analyzing his verb usage patterns. This interview was mechanically recorded, and a typed transcription was prepared from each tape.

After the transcriptions were completed, 25 kernel sentences were selected from each child's speech sample and analyzed for verb usage patterns. Five categories were considered: auxiliaries, tense (present, past, future), agreement (number, person), invariant be, and omissions. Standard and nonstandard usage of these forms were noted and special attention was given to nonstandard verb usage for the purpose of noting differences in dialect.

The principle findings from this investigation were as follows:

1. The standard formation of present, past, and future tenses; person and number agreement; and auxiliaries was found in both groups.
2. Nonstandard formations, as categorized for this study, were found in both groups. This involved nonstandard tense formation, agreement, auxiliaries, omissions, and the use of invariant be.
3. The nonstandard usage was found in greater proportions in the lower reading group. Likewise, the greater proportion of standard English was found in the upper reading group.
4. Standard and non-standard usage was found in all schools, but in varying degrees.
5. Variations were found in the individual use of standard and non-standard forms.
6. The differences in use of nonstandard forms were much greater in the upper group than the lower group.
7. The lower group was more consistent in nonstandard usage.

Conclusions: Conclusions based on the findings in this study were:

1. There are variations in the individual use of nonstandard verb usage among Negro children. This varies from school to school, group to group, within the same school, and within the same group.
2. Findings in the upper group show that nonstandard usage is probably not a significant factor in acquiring basic reading skills because there was a range of low nonstandard usage and a range of high nonstandard usage.
3. The lower group shows that there is a relationship between low reading ability and high incidence of nonstandard usage.
4. Results show a speech community of high nonstandard usage and a speech community of low nonstandard usage within the inner city of Cleveland.
5. The usage of nonstandard verb forms found in the Cleveland area are roughly equivalent in type to those forms found in other large urban areas.

The implications based on the findings and conclusions of this study were:

1. The variety of dialectal patterns in a given community and a given classroom seems to indicate that it would be highly impractical to attempt construction of dialect-based reading materials since so many different patterns would have to be included.
2. Some of the children in the upper group show that nonstandard usage doesn't have to be a problem in acquiring reading skills, but the lower group shows that there is a factor relating to dialect and reading skills in operation, hence the parallel between the lower reading group and the high incidence of non-standard usage.
3. Differences of nonstandard usage in the various schools indicate that the community plays a big role in determining usage.
4. In working with these children, the teacher needs to know about the usage patterns of the community, and of the individual children within the classroom.
5. Evidence of individual inconsistencies in use of nonstandard features indicates that children must use reading materials constructed to fit their individual needs.

72. Strickland, Dorothy Salley. The Effects of a Special Literature Program on the Oral Language Expansion of Linguistically Different, Negro, Kindergarten Children. New York University, 1971. 127p.
Adviser: Professor Bernice E. Cullinan. 71-24,816.

An attempt was made to expand the language performance of economically disadvantaged, Negro, kindergarten children through exposure to a special literature program emphasizing related oral language activities. The need for a preventive approach to reading failure among these children led to a program designed to expand their language to include

standard English which would reduce the divergence between their natural dialect and the one in which they are taught reading and writing skills. It was expected that exposure to such a program would facilitate readiness to read.

Hypotheses:

1. Linguistically-different, Negro, kindergarten children who are exposed to a literature-based oral language program will manifest greater language expansion than a comparable group of children lacking exposure to such a program.
2. A special program of literature and related oral language activities will result in a higher level of reading readiness on the part of those children who are exposed to it as opposed to a comparable group of children lacking such exposure.

Fifteen subjects were randomly selected from each of eight kindergarten classes located in the lower socio-economic areas of two metropolitan communities participating in the study. Due to attrition, the final number of students remaining at the end of the study were 45 in the experimental group, which had been exposed to a literature-based oral language program consisting of daily reading aloud from selected children's books and followed by an oral language activity. Forty-nine remained in the control group, which had been exposed to daily reading aloud followed by a placebo activity which did not seek oral language participation by the children.

Each classroom was provided with fifty books which met the criteria for literary merit indicated by the endorsement of authoritative organizations in the field and additional criteria pertinent to this study. All teachers attended a series of workshops related to children's literature. The experimental teachers received additional training in specific techniques for reading aloud and the use of related oral language activities to effect language expansion. All teachers were provided with handbooks containing suggestions for the type of activities they were expected to conduct.

Experimental and control groups were given the Education Study Center Bidialectal Task for Determining Language Proficiency in Economically Disadvantaged Negro Children in October and again in May. The raw score for the correct repetitions of standard and nonstandard structures were tallied. An analysis of these repetitions yielded a measure of flexibility between the native dialect and standard English.

The New York City Prereading Assessment was administered in May. The raw scores for Parts I-Language and II-Visual Discrimination were used to determine the level of reading readiness of the subjects.

Analysis of variance was performed on the posttest results of the standard repetitions on the Bidialectal Task, using the pretest scores as the covariate. This analysis revealed a significant F ratio favoring the experimental group beyond the .01 level. The same analysis completed on the nonstandard repetitions showed no significant difference between the two groups.

Analysis of variance of posttest scores for Parts I-Language and II-Visual Discrimination of the Prereading Assessment revealed no significant differences between the two groups.

The experimental treatment offers strong evidence that educationally disadvantaged, Negro, kindergarten students who speak a nonstandard dialect can expand their language repertoire to include standard English. Equally important, the analysis of the nonstandard repetitions indicates that this can be done without negating the child's native dialect. The combined results indicate a high degree of flexibility in language on the part of the experimental group. The results of the Prereading Assessment revealed no evidence to indicate that the treatment had an effect upon the components of reading readiness measured.

Language--

Pre-Kindergarten

73. Amsden, Constance E. A Study of the Syntax of the Oral English Used by Thirty Selected Mexican-American Children Three to Five Years Old in a Preschool Setting. Claremont Graduate School and University Center, 1969. 197p. 70-9810.

This study was a descriptive analysis of the oral English syntax of thirty Mexican-American children, ages three to five. The purposes of the study were threefold: (1) to determine the syntactical patterns used, (2) to identify the influences of oral Spanish on the children's English syntax, and (3) to develop hypotheses about various aspects of the oral language development of Mexican-American preschoolers. Such hypotheses may provide the basis for further research.

The subjects were thirty Mexican-American Preschool children, three to five years old, living in a low socio-economic Spanish-English-speaking community and attending an East Los Angeles preschool. Tape recordings were made of the spontaneous oral language used by these children during the preschool day. These recordings were transcribed by bilingual Mexican-American transcribers.

Language samples selected at random were analyzed, using measures of syntax developed by other investigators, as well as several variety measures developed for this research study. These measures were of four major types: (1) basic structure, (2) complexity, (3) variety, and (4) variations from standard English. Intercorrelations were obtained for eighteen of these language measures.

The children's language appears to be forceful, full of imperatives and interjections, but lacking in qualifiers and evidences of subordination. A low level of complexity and variety in their oral English furnishes additional evidence of early English language deficit.

1. The preschoolers used the imperative much more and the interrogative much less than did the children in studies cited. Only nine different common nouns and two descriptive adjectives were used more than one time per thousand words; however, the demonstrative "this" and "that" appeared very frequently.

2. The children's language was of a low level of complexity; only one-sixth of their T-units included phrases; only 3 percent included subordinate clauses. Adverbial constructions were rarely used.

3. Several variety measure developed for this study increased significantly from age three to four, indicating the children's achievement of greater flexibility in the use of English language.

4. Although these children lived in Spanish-English-speaking neighborhood, and the use of both Spanish and English was acceptable in the preschool, only a small percentage (less than 10 per cent) of the

children's T-units were in Spanish. However, the influence of their linguistic environment was evident in the frequent transfer of Spanish words into the English language stream, the formation of "Spanglish" words and awkward word arrangement. The resultant confusions added to the children's English language deficit.

5. The number of verbal variations and the total number of variations from standard English increased from age three to age four as children used a greater variety of syntactical patterns.

Seven new hypotheses were developed for testing with larger and more representative groups of young Mexican-American children.

74. Flake, John Keith. A Study of an Instrumentation Technique in the Language Development of Preschool Age Children from Disadvantaged Families. University of Alabama, 1969. 150p. 70-1379.

This study was conducted to investigate the effectiveness of the Language Master (LM) in the language training of 4- and 5-year old disadvantaged preschool children. The sample consisted of six intact classrooms randomly selected from a population of 600 children in 42 classrooms. Comparative social data indicated that the sample was similar to the total population. The sample ($N=56$) was evenly divided into experimental and control groups. The study locus was the Huntsville, Alabama, Educational Improvement Program (EIP).

The Study was initiated in September, 1967, with the collection of pretest data; followed by a 12 week training period for the experimental subjects; and terminated in April, 1968, with posttest data collection.

Quantitative data were collected from the Stanford-Binet Intelligence Scale (SBIS), taped speech samples, and the Peabody Picture Vocabulary Test (PPVT). The five year old subjects were given a posttraining test, the Metropolitan Readiness Test (MRT). Population data were utilized to compare the sample with the EIP population.

Four hypotheses were tested: Hypotheses I, II, and III were concerned with changes in word ending, stuttering, sound omission, sound distortion, and sound substitution-speech errors in the total sample, 4- and 5-year old subjects respectfully; Hypothesis IV involved MRT posttraining of the five year old subjects.

The experimental group training utilized only materials prepared by the LM's manufacturer. No sound reproducing devices were allowed in the control classrooms.

The Lindquist (1956) Type III design and analysis of variance were utilized to test all hypotheses. The following results were obtained:

Training with the LM had no statistically significant effect on word ending or sound distortion errors by any groups. There were no statistically significant changes in sound omissions or substitutions by the combined age groups. However, the four year old controls made

statistically significant reductions in these two speech qualities. Stuttering was not observed in the subjects.

Training with the LM had no statistically significant effect on the PPVT Mental (MA) scores of the combined age groups. All groups, except one, made positive changes. In most instances the MA change did not equal the number of months between pre- and posttest. The four year old controls made significantly greater improvement than did their experimental counterparts.

The SBIS pre- and posttest scores of all groups were significantly increased. The increased MA's were not statistically significant when compared to groups' experimental or control counterparts.

The LM training had no statistically significant effect on the MRT scores of the five year old experimental groups.

Conclusions:

Improvement in speech was a general characteristic of all the study groups regardless of LM training. However, with the exception of improvements in sound omissions and substitutions by the four year old controls none of the changes were statistically significant.

Statistically significant PPVT MA score changes were discovered only with the four year old control group. The gains in PPVT scores did not generally equal the intervals in months between pre- and posttest. The LM training did not significantly effect PPVT scores.

While statistically significant gains in SBIS MA scores occurred in all groups the improvements could not be traced to the effects of LM training.

Training with the LM had no statistically significant effect on MRT scores.

Further research concerning the use of the LM was recommended.

[Page 129 "Nouns; EVERYDAY THINGS" not microfilmed at request of author. Available for consultation at University of Alabama Library].

75. Lindquist, Mary Louise. Teaching Specific Skills in Language and Cognition to Disadvantaged Preschoolers. The University of Wisconsin, 1969. 155p. Adviser: Associate Professor John Giebink. 69-22,426.

Research concerned with the compensatory education of disadvantaged children points to language deprivation as a primary causative factor in the "cumulative deficit" in education and school failure of these children. Among the verbal skills and habits deficient in this group of children are knowledge of the rules of morphology and syntax, flexibility of syntax that permits taking apart and recombining sentences and understanding and expression of individual intent, a conceptual hierarchy useful for interrelating and organizing learning, associations useful in learning and retention, and the habit of verbal mediation in problem solving.

From a psycholinguistic framework a method was devised to teach some of the essential linguistic skills in a short intensive program. The method included the following three processes: 1) Modeling. Models

of the particular language skills were presented to the children. These were structured in such a way as to facilitate formation of hypotheses about the use of each particular generalization. 2) Hypothesis testing. Induction of hypotheses about each rule and its application in a wide variety of contexts was elicited from the children. Wide variety was provided to develop flexibility in application of the generalization. 3) Hypothesis checking. Provision was made of corrective, extending feedback for the children to use in checking and extending their hypotheses.

Two experimental groups of four- and five-year-old children were trained in four aspects of language. One group of seven was trained in morphology and part-whole relationships; the other group, consisting of six subjects, was trained in syntax and classification. A control group of ten was given group language training according to traditional methods. Pre- and post-training measures were taken on nine dependent variables and these were combined to form one score for each of the four training areas. Both treatment groups showed significantly more improvement than the control in classification, part-whole relationships and syntax. The group trained in classification was also significantly superior to the other treatment group in classificatory skills.

The following conclusions were drawn:

- 1) Children do acquire knowledge of rules of language which they can apply in new contexts and using new words.
- 2) These generalizations can be explicitly taught in a short intensive training program.
- 3) The methods used in the program--modeling, hypothesis testing, and hypothesis checking--are effective for teaching both the rules of sentence formation and the verbal-conceptual hierarchies useful in learning.
- 4) The skills and habits necessary for verbal mediation in problem solving can also be taught. The habit of using verbalization in solving problems was developed in both treatment groups. Subsequently performance in a visual-motor task was improved and better organized. There is evidence that both the skills and the habits necessary for mediation do develop in verbal interaction with an adult model.

76. Teska, James Allen. Success and Failure in Five Different Programs of Preschool Intervention with Culturally Disadvantaged Children. University of Illinois, 1969. 171p. 70-1001.

This study was an investigation of the relationship between the presenting language, intelligence, and family background characteristics of culturally disadvantaged preschool children ($N=114$) and the differential progress of these children in five preschool programs. These interventions included a Traditional nursery school, a Community-Integrated program (disadvantaged children attending traditional preschools with advantaged peers), a Montessori preschool, an Ameliorative program which emphasized language development through verbalizations

obtained in conjunction with manipulative materials, and a Direct Verbal program which emphasized language development through oral pattern drill. The test data analyzed consisted of the Illinois Test of Psycholinguistic Abilities (ITPA) standard score, Stanford-Binet IQ, Metropolitan Reading Readiness Test raw score, and California Achievement Test total reading grade placement. Data on seven family background variables obtained at the time the children were recruited were considered: presence of the father in the home, educational level of the father, birthplace of the father, educational level of the mother, employment of the mother, birthplace of the mother, and number of children in the family.

For children with initially low ITPA scores there was little relationship between program emphasis and gain on related subtests, with the exception of the Vocal Encoding test. Further there was little relationship between gain on the ITPA tests and subsequent performance on other test variables. There was some evidence that children who had scored low on specific ITPA tests initially demonstrated better progress on other test variables when they were enrolled in preschool programs which placed little emphasis on activities related to their initially low subtest scores.

Although the numbers of children who made large IQ gains, high readiness scores, or high achievement scores differed among the five programs, there was little evidence that children with similar presenting test scores made greater progress in any of the programs. However, the Direct Verbal program was highly successful in fostering first-grade reading achievement with the four children with initial IQ scores between 70 and 89 (low IQ strata).

The traditional, Community-Integrated, and Montessori programs were relatively ineffective with children from more disadvantaged family backgrounds. The Ameliorative program was highly effective with children from less disadvantaged backgrounds and much less effective with children from the most disadvantaged backgrounds. The Ameliorative program was, however, more effective with the more disadvantaged children than any of the above three programs. The Direct Verbal program was less effective than the Ameliorative program with children from less disadvantaged backgrounds and was as effective as the Ameliorative program with children from more disadvantaged backgrounds.

77. Alswoth, Philip Lindell. An Investigation of the Contribution of Machine-Based Instruction to Performance of Preschool Disadvantaged Children in Certain Language Skills. State University of New York at Buffalo, 1970. 184p. 70-22,098.

This study was designed to investigate the influence of instruction using the Language Master machine on certain language skills of young disadvantaged children. Specific skills were: hearing vocabulary, the ability to complete verbal analogies, the ability to express ideas in spoken words, and the ability to relate perceptually similar pictures.

Subjects were ninety Negro children attending a federally funded preschool center during 1966-67.

The Language Master machine and selected word cards illustrating basic concepts were utilized as the experimental procedure.

Four experimental and two control groups were established by random assignment from eight classes. Two experimental groups received instruction on a less intensive basis (two sessions per week for six weeks) and two on an intensive basis (four sessions per week for three weeks). One less intensive and one intensive instruction group worked with 125 Language Master cards on an unrestricted basis (cards could be repeated), and one less intensive and one intensive group worked with 25 Language Master cards on a restricted basis (cards could not be repeated).

Control groups received no machine-based instruction.

Instruments used to measure language skills were the Peabody Picture Vocabulary Test and the Auditory-Vocal Association; Vocal Encoding and Visual Decoding subtests of the Illinois Test of Psycho-linguistic Abilities.

All subjects were pre- and post-tested. The two experimental groups which received machine-based instruction on an intensive basis and one control group were administered long-term retention tests six months after the conclusion of instruction.

Findings: One-way analyses of covariance with three covariates (PPVT pre-test, chronological age, and mental age) revealed that the experimental group means were significantly greater ($<.01$) than control group means on all four criterion variables. Eight of twelve covariance analyses with one covariate detected similar significance. One analysis detected significance favoring experimentals at the .05 level.

One-way analyses of covariance with three covariates revealed significant differences ($<.01$) between unrestricted, restricted, and control group means. Unrestricted and restricted group means were significantly greater than control group means. On one variable, hearing vocabulary, the unrestricted group mean was significantly greater than the restricted group mean. Only one of the twelve analyses of covariance with one covariate detected a significant difference ($<.05$) between groups.

None of the one-way analyses of covariance with three covariates and only one analysis with one covariate detected significant differences between less intensive and intensive instruction groups. Significance ($<.05$) favored the less intensive group on hearing vocabulary.

When long-term retention data were analyzed there was significance only in the one-way analysis of covariance with three covariates on hearing vocabulary. Significance, however, favored the control group ($<.01$).

Conclusions: Findings indicated that exposure to machine-based instruction had a positive influence on preschool children's performance in certain language skills. When long-term retention was examined, it was apparent that the control group had narrowed or closed the

performance gap between it and experimental groups.

In general, although mean scores of groups receiving instruction were greater than mean scores of non-instruction groups, scores of all groups on all variables were considerably below the published test norms.

Results of the study suggest that machine-based instruction may have utility as a teaching aid in preschool programs for the disadvantaged. Further investigation of such instruction under varied conditions including specific follow-up activities appears warranted.

78. Jones, Eloise Lorraine Harriss. The Effects of a Language Development Program on the Psycholinguistic Abilities and IQ of a Group of Pre-School Disadvantaged Children. University of Arkansas, 1970.
215p. Adviser: Dr. Glenn A. Cole. 70-26,204.

Twenty-six rural Northwest Arkansas, white, preschool children (fourteen males and twelve females) ages four through six years from homes whose family income fell below the Office of Economic Opportunity Poverty Guideline were studied to determine the effects of a group language development program (the Peabody Language Development Kit, Level #P, Final Edition) on their psycholinguistic abilities (as measured by the Revised Illinois Test of Psycholinguistic Abilities) and IQ (as measured by the Wechsler Preschool and Primary Scale of Intelligence). Additionally, the significance of sex in relation to changes in psycholinguistic abilities and IQ following experimental treatment was evaluated.

The experimental design was such that each child served as his own control. The procedure included an initial evaluation (the First Testing Period) with the WPPSI and the ITPA. The First Testing Period was followed by a no-treatment period during which the subjects participated in the ongoing program at a Day Care Center which could be characterized as a traditional nursery school-kindergarten with an emphasis on supervised free play. This no-treatment period was terminated by the Second Testing Period during which the WPPSI and the ITPA were repeated. Following the Second Testing Period, the treatment period was offered with daily (five days a week) instruction with the PLDK, Level #P. The duration of the instructional period for each subject was approximately equivalent to that number of days between the First Testing Period and the Second Testing Period. The mean number of daily lessons for the group was 56.

Examiner bias was considered by a retesting of twenty-four randomly selected subjects by an independent examiner. No significant difference was found between the scores obtained by the research examiner and those obtained by the independent examiner. This additionally ruled out the possibility of significant practice effect on short-interval test-retest.

Analyses of variance were done on data derived from the ITPA Composite Scaled Scores, the WPPSI Full Scale Scores, the WPPSI Verbal Scale Scores, and the WPPSI Performance Scale Scores using an unweighted-means solution to a two-factor experiment having repeated measures on one element with unequal group size.

In none of the analyses was the sex factor significant. In the analyses of the ITPA Composite Scaled Scores and the WPPSI Full Scale both the no-treatment and the treatment periods showed significant increases in psycholinguistic abilities and in IQ scores.

The results of this study support the thesis that young children from disadvantaged backgrounds are teachable and that scores on measures of IQ and psycholinguistic abilities can be significantly increased even after short periods in programs designed to stimulate the development of language. These children also respond with significant increases in psycholinguistic abilities and IQ scores following traditional nursery school-kindergarten experiences.

79. Williamson, Jack A. Experimental Preschool Intervention in the Appalachian Home. University of Kentucky, 1970. 175p. Adviser: Dr. Morris B. Cierley. 71-19,400.

The purposes of this study were to investigate selected behavior responses of environmentally deprived Appalachian preschool subjects through an experimental preschool intervention project and to determine a productive and efficient teaching method which can be used with Appalachian preschool subjects in their homes. The independent variable involved three types of experimental intervention and one control. Dependent variables were: Verbal behavior responses, performance behavior responses, school readiness behavior responses and drawing behavior responses of 40 randomly selected Appalachian preschool subjects from deprived environments.

Instruments used in gathering the data included: The Peabody Picture Vocabulary Test (PPVT) as a measure of verbal behavior, The Porteus Maze Test (PMT) as a measure of performance behavior, The Lee-Clark Reading Readiness Test (LCRT) as a measure of school readiness behavior and the Koppitz Human Figure Drawing Test (HFD) as an assessment of the subject's perception of self.

Methodology included: Pretesting, 20 weeks of experimental intervention involving two weekly home visits per week by college students who had been trained in three different teaching methods; and post testing. The administration of pre and post PPVT, PMT, and HFD tests was supervised by a licensed clinical psychologist who was assisted by three certified psychologists. Teachers administered the LCRT under the supervision of an educator.

Data on all 40 subjects were analyzed in the following ways. Separate simple analyses of variance were applied to the observations (Post test minus pretest scores on all subjects) provided by each of the four instruments. Treatment variances were subjected to the F test and treatment means were tested for significance by the t-Test of Differences among Treatment Means. Twelve hypotheses related to the problem were tested at the .05 level of significance. Pretest and post test sample means on the PPVT, PMT, and LCRT were compared to population means utilizing student's t to test six hypotheses at the .05 level.

of significance. Coefficients of association were determined for all pre and post tests and for pre and post test differences.

Findings resulted in the following conclusions: (1) Unless formal instruction is received during the early preschool years, Appalachian preschool subjects make significantly fewer verbal responses than the general population; (2) With formal instruction, subjects move closer to the population in a brief period, indicating that their verbal behavior is amenable to treatment; (3) Appalachian preschool subjects exhibit a problem solving ability enabling them to make significantly more performance behavior responses before intervention than the general population; (4) Performance ability seems to be related to a planning capacity independent of environmental deprivation and educational inequality but not vitally related to type of instruction and materials; (5) Appalachian subjects make significantly fewer school readiness responses than preschool subjects in the general population, but make an equal or greater number of readiness responses after treatment; (6) If drawing responses are assumed to portray the inner child of the moment, then appalachian preschool subjects move to a significantly more positive perception of self as a result of the reinforcing warmth, acceptance and affection of teachers who provide healthy identity models; (7) Appalachian preschool subjects can learn in a deprived environment if new stimuli are introduced and familiar stimuli are reinterpreted; and (8) College students, who are interested and concerned about preschool children, can relate to the subjects and their parents with warmth and acceptance and perform as teachers with a moderate amount of expertise.

80. Drdek, Richard E. A Study to Determine Whether a Program for Building Concepts Significantly Enriches the Communication Skills of Prekindergarten Children. State University of New York at Buffalo, 1971. 133p. 71-16,451.

A model program for use in prekindergarten had been developed for the study. The model attempted to enrich the communication skills of prekindergarten children through a series of fifty concept-building lessons. It was assumed that by stimulating conceptual behavior growth in oral language usage would occur. The study was designed to test that assumption.

The six hypotheses tested were:

1. After 50 special lessons, there are no significant differences between the growth in mental age of the treatment group and the control groups as measured by gains in pretest and posttest scores from the PPVT.
2. There are no significant differences in vocabulary growth between the treatment group and the control groups as indicated by the derived scores from the PPVT.
3. There are no significant differences between the length of responses of the treatment group and the control groups when length of response

is measured by computing the average words per speech unit in free conversation.

4. There are no significant differences between the levels of sophistication of the language used by the treatment group and the control groups as computed by rating each different word according to a scale based upon the Thorndike-Lorge word list.

5. There are no significant differences between the levels of syntactical understanding demonstrated by the treatment group and the control groups as measured by the Northwestern Syntax Screening Test.

6. There are no significant differences between the total number of modifiers used by the treatment group and the number used by the control groups.

Holding the MA as the covariate, a one-way analysis of covariance was computed on the six criterion variables, using COVAR, a computerized program at the University of Rochester. A computed F greater than a 5 percent level was established as rejecting a hypothesis. The results were:

No significant differences were found on the gains in MA of the experimental group and either of the control groups; therefore, H1 is retained.

No significant differences were found on the derived scores of the experimental group and either control group; therefore, H2 is retained.

A significant difference favoring the experimental group over the two control groups was found on the length of response; therefore, H3 is rejected.

A significant difference favoring the experimental group over the two control groups in levels of language sophistication was found; therefore, H4 is rejected.

In comparing levels of syntactical understanding, a significant difference was found to favor the experimental group over Control 1 Group, but no difference was found between the experimental group and Control 2 Group. H5 is, therefore, retained.

A significant difference favoring the experimental group over the two control groups was found in comparing the number of modifiers used; therefore, H6 is rejected.

Conclusions: The results show no absolute support for the model tested. However, there is an indication that some of the procedures and methods used have an educational value.

81. Lavin, Claire Marie. The Effect of a Structured Sensory-Motor Training Program on Selected Cognitive and Psycholinguistic Abilities of Preschool Disadvantaged Children. Fordham University, 1971. 164p. Adviser: Dr. Joan Fairchild. 71-27,015.

This investigation sought to determine the effect of a sensory-motor training program on the psycholinguistic and intellectual abilities of preschool disadvantaged children. Comparisons with a control group of disadvantaged children who received no special treatment were conducted to determine the significance of mean differences in intelligence,

general psycholinguistic ability, and twelve specific psycholinguistic abilities: auditory reception, visual reception, auditory vocal association, visual motor association, verbal expression, manual expression, grammatic closure, auditory closure, sound blending, visual closure, auditory sequential memory, and visual sequential memory.

The subjects of the study were 54 preschool children living in Harlem in New York City. The subjects were chosen from a total of 83 applicants to a preschool program. The subjects were representative of the poverty area in which they lived. Twenty-seven of the subjects were randomly assigned to the training program. Twenty-seven additional subjects served as a control group. The Illinois Test of Psycholinguistic Abilities and the Peabody Picture Vocabulary Test were individually administered to each subject. Initial analysis of differences in mean age, IQ score, and total psycholinguistic ability score revealed that no significant differences existed between the members of the experimental and control groups.

Children in the experimental group attended nursery school eight hours daily for a six month period. The curriculum at the school consisted of a sensory-motor training program designed by the New York Institute for the Achievement of Human Potential according to the rationale of Carl Delacato. The program consisted of sensory training activities involving visual, auditory, tactile, and gustatory stimulation and discrimination. Specific visual training activities included visual pursuits, eye tracking movements and perceptual training, including reading instruction to develop the visual pathways. Auditory training included discrimination and listening activities, discussions and auditory memory games. Motor training activities involved homolateral and cross pattern creeping, crawling, and walking. During this period, subjects in the control group remained at home and received no special treatment. After six months, the remaining 24 experimental and 21 control subjects were again tested with the Peabody Picture Vocabulary Test and the Illinois Test of Psycholinguistic Abilities. To achieve proportionality of cells for the statistical analysis, three subjects were randomly removed from the experimental group. The statistical analysis consisted of fourteen double classification analyses of variance with repeated measures on one factor. The criterion measures were total psycholinguistic ability, twelve specific psycholinguistic abilities and intelligence.

The results revealed that subjects in the experimental group scored significantly higher than control subjects in general psycholinguistic ability, and in four specific psycholinguistic abilities, visual reception, visual sequential memory, auditory association and visual association. There were no significant differences between the mean scores of experimental and control subjects in intelligence or in the remaining eight psycholinguistic abilities.

The experimental sensory-motor training did not effect a significant change in the intellectual functioning of preschool disadvantaged children. It did lead to improve psycholinguistic functioning for subjects in the experimental group, but this improvement was limited to

four specific psycholinguistic abilities and overall psycholinguistic ability.

The recommendations made following the conclusion of the study included a more specific investigation into the various elements of the experimental program to determine which factors led to the noted improvements. It was also recommended that the Delacato program be compared with the results of other preschool programs for the disadvantaged. Further recommendations included a follow up study of the subjects in the investigation, and an investigation into the effect of the program on non-cognitive factors.

82. Moore, Donald Roberts. A Comparison of Two Methods of Teaching Specific Language Skills to Lower Class Preschool Children. Harvard University, 1971. 318p. 72-1154.

This thesis examines the relative effectiveness of two experimental treatments and one control treatment in developing the language skills of lower class preschool children. It also examines the nature of the language interaction between student and teacher within each type of treatment session and the relationship of this language interaction within treatment sessions to student language growth.

The three treatments studied are Patterning (in which specific verbal responses are required of the child), Extension (in which the teacher creates a rich verbal environment for the child but does not demand specific verbal responses from him), and Activity (a control treatment in which the child engages in traditional preschool activities with no special emphasis on language development).

The content of the Patterning and Extension Treatments was developed through an examination of the literature on subcultural language differences. On the basis of the nature of social class differences reported in previous studies, the conclusion was reached that the primary focus of a language program for lower class preschool children should be on the development of a precise language of description that could be used to communicate independent of the specific context of the communication.

At the beginning and end of the fourteen week experimental program, tests of ability were administered in the following areas: intelligence, language competence, accuracy of specific language use, and complexity of specific language use. In addition, data was collected concerning the quantity and quality of teacher and student language use in treatment sessions.

Results are subject to many qualifications spelled out in detail in the full report of results. Results are best viewed as hypotheses for future study rather than established findings. With these limitations in mind, the key results are as follows:

- (a) The Patterning Treatment is differentially effective (as compared with Extension and Activity) in raising the IQ scores of lower class preschool children. The effects are most pronounced in this experiment with students whose initial IQ scores were 60-85.

- (b) The Patterning Treatment is differentially effective (as compared with Extension and Activity) in developing specific language use accuracy and complexity.
- (c) There are important differences in the quantity and quality of student language use in the Patterning Treatment sessions, as compared with the Extension and Activity Treatments. All students in the Patterning Treatment reached levels of language use that only a small portion of students reached in either of the other two treatments.
- (d) Student language use in treatment sessions is influenced more by the student's particular treatment group than by his initial level of Verbal IQ.
- (e) The level of teacher language use in treatment sessions is not a significant predictor of student growth in specific language use accuracy and complexity.
- (f) The level of student language use in treatment sessions is a significant predictor of student growth in specific language use accuracy and complexity.
- (g) The conceptual distinction between four areas of ability (intelligence, language competence, complexity of specific language use, and accuracy of specific language use) was supported by a factor analysis of pretest scores from the study.

In addition to these substantive hypotheses for future study, this investigation suggested the value of a number of methodological approaches to the study of preschool language programs. The most important of these suggestions is that future studies of the relative effectiveness of various program should emphasize the empirical study of the process of student-teacher interaction within the treatment sessions to isolate those particular characteristics of student-teacher interaction that are related to student language growth across programs.

65. Morgan, Dorothy Lindsley. A Comparison of Growth in Language Development in a Structured and a Traditional Unruh Preschool Compensatory Education Program. United States International University, 1971. 133p. Adviser: Bernice Roberts. 71-6045.

The purpose of this study was to determine whether it is possible to increase the effectiveness of an Unruh Preschool Compensatory Education Program through an experiment in the application of direct instruction in knowledge and skills needed for academic success. The direct instruction specifically consisted of deliberately planned lessons involving demonstrations, drill, exercises, and problems, and was primarily focused on using oral language in the manner required in academic work in the primary grades.

The study compared the growth in language development between the experimental group receiving the direct instruction and the control group receiving a more non-directive traditional type of program. There were 94 three and four year old children all certified as economically deprived

by the San Diego Department of Public Welfare in the study. The project was located at an elementary school in a suburban community south of San Diego. The language development of all children was measured in September, 1969 and in May, 1970, with the Illinois Test of Psycholinguistics, a comprehensive instrument for the assessment of language development in children. The results of the ten subtests which were used in the study reveal specific language abilities and disabilities of children and also indicate whatever remedial work may be necessary to help overcome a child's deficiencies in language development.

Fifty-seven percent of the children were of Mexican-American descent, thirty-nine percent were of white-American background; and four percent were black. There were a total of 94 children in this study. Forty-two were in the experimental group, and 52 were in the control group.

Comparisons of the experimental and the control groups were made as follows: of the total groups, of the three year olds, four year olds, white-Americans, Mexican-Americans, females, males, AM and PM classes. The statistical treatment was by standard t-test calculations determining the significance of the difference between the means, utilizing a Burroughs B-5500 Computer.

Results of the study indicated that: (1) In overall language development the direct instruction program produces more growth than the traditional program for the total group, as well as for all the subgroupings, by age, ethnic background, sex, and AM and PM classes. (2) Definitive statements regarding the subtests cannot be made. (3) The subtests showing the greatest statistical significance in growth in favor of the experimental group are those which measure the higher thought processes. (4) Tests of short term visual and auditory memory do not show statistically significant growth over the traditional program.

The findings of this study support the evidence which is accumulating that for educationally deprived children an academically oriented direct instruction program produces significantly greater achievement.

It is postulated that the overall development of the child cannot be realized if his educational deficits are not made up. Unless he is prepared for successful school experiences, it is very difficult in the school setting to maintain a positive self-image and emotional strength within the child, or even to integrate him successfully into the present school program.

84. Schrader, Margaret Mary. Task and Peer Related Spontaneous Speech in Nursery School Settings., State University of New York at Buffalo, 1972. 73p. 72-15,632.

To secure some base-line data on children's spontaneous language usage in the relatively non-structured, developmentally oriented nursery school, specimens of language were collected in various learning centers.

The sample of thirty children between the ages of eighteen months and four years, nine months was representative of many socioeconomic and ethnic groups.

Approximately one thousand samples of spontaneous speech were recorded in nine different settings in the nursery school using a time sampling technique. The samples were categorized according to the relevancy of the speech to the task in which the child was engaged and its dialogic or monologic characteristic.

Analysis of the data indicated both the substantial increase in frequency in dialogic task-relevant speech and in total speech productivity from age two to age four. Further examination of the totals of the monologic and dialogic speech results revealed an apparent developmental pattern as the ratio of dialogic to monologic task-relevant speech increased dramatically with age. Although a slight increase in monologic speech was observed between age groups two and three, the increase in dialogic speech was much more pronounced. In the case of the four year olds a significant decrease in monologic speech and a substantial increase in dialogic speech was noted. Therefore, the ratio of dialogic task-relevant to monologic task relevant speech in group situations became the criterion for language maturity in this study.

The proportion of task relevant speech to total speech (relevant and irrelevant) indicated the overwhelming use of relevant speech. In the three age groups the proportions ranged from 94.7% to 97.2%.

Using the raw data on the task and peer relatedness of speech a learning model was constructed in which sex, age, verbal score on a language scale and learning center (type of material used--unstructured, semi-structured and structured) became the predictors. The ratio of dialogic task relevant speech to monologic task relevant speech was utilized as the criterion of speech maturity. Analysis revealed a multiple R of .560 and a multiple R^2 of .314 for the full model, indicating that 31% of the variance in the criterion is associated with the predictors.

A partitioning of variance procedure to explain the percentage of the criterion variance that is uniquely associated with a predictor and the commonality--the percentage of variance associated jointly with the predictors revealed that age is the strongest predictor. However, age and test score showed a high degree of commonality (confounding). Noteworthy, although not as pronounced in the prediction function, was the learning center (the specific nursery school environment). Approximately nine percent of the criterion variance is explained by the learning center. The commonality with the other predictors in this partitioning procedure was essentially zero or no confounding effect with age, sex or test score. Apparently, children of different ages, sex and verbal ability chose the same centers and materials, but undoubtedly used them in a different manner.

The centers (categorized by the degree of structure inherent in the center) which evoked the most mature speech were those that are relatively unstructured, i.e., sand, water and imitative housekeeping play. The implication seems strong for school personnel since this predictor--the nursery school environment--is especially controllable by the

school. Results reveal that opportunity within the nursery school program for exploration and manipulation of sensory materials and for imitative play was associated with measurable oral language learnings.

Language--

Kindergarten and First Grade

35. Yonemura, Margaret Valerie Sheila. A Study of the Ability of Nursery and Kindergarten Children from Low Socioeconomic Backgrounds to Develop More Adequate Language Skills Through A Special Language Program. Columbia University, 1965. 309p. Advisers: Professor Kenneth D. Wann, Professor Robert L. Allen. 65-14,998.

The purpose of this study was to investigate the ability of nursery and kindergarten children of low socioeconomic backgrounds to learn, through a specially devised language program, certain standard American English grammatical structures. These included usage of is and 's; standard word order after a wh-question marked word, such as who, why, and where; standard usage of his, her and their and use of complex and compound utterances. The response of the children to the language program during its execution was recorded in order to gain a qualitative degree of insight and a quantitative estimate of the efficacy of the program.

Abbott House, the setting, is an institution for about a hundred well-neglected and dependent children between the ages of two through twelve years. It has a high ratio of professional staff to children, and its services include a school for thirty of the youngest children. The school has a nursery group and two kindergartens, supervised by the researcher of this study.

A group of ten children between the ages of three and five years was selected as the exploratory group in the fall of 1963. While it would have been useful to have compared the progress of the exploratory group with that of a comparable control group, the small population of the school precluded this. However, by way of offering a suggestive comparison, a speech corpus was collected in the Spring of 1963 from 25 of the children who then attended the school. Ten of these children were selected to act as a comparison for the exploratory group which they matched for the following variables significant in language development: hearing, sex, being twins, social class, parental background, age, intelligence, family constellation, bilingualism and ethnicity.

The specially devised language program was carried out by the entire school from September 1963 to Spring 1964. It consisted of puppet plays, language exercises, special stories and slides, and cooking experiences, all of which offered practice in the grammatical studies being taught as part of the study. These particular activities were selected as vehicles for the language program because they were rated highly by the researcher and the teachers in terms of stimulating conversation. The language program lasted about fifteen minutes daily.

The program was evaluated qualitatively by means of anecdotal and running records. Language utterances were collected from the exploratory

group in September 1963 and in Spring 1964. They were collected in three different situations since language is known to be situationally differentiated. Twenty-five utterances were collected in free play in the classroom; in a teacher-directed lesson; and in a tape recorded interview between a teacher and one or two children. In order to test the efficacy of the language program, language utterances were collected from the exploratory group December 1963. Each of these corpora were analyzed for their degree of usage of the grammatical structures being taught.

The September and Spring results of the exploratory group were compared. The exploratory group made gains in the Spring that were significant at the one percent level of confidence in the following situations of the categories being taught: in the taped situation for the is and 's category; in the teacher-directed situation for the wh-question marker category and for the complexity of utterances category; and in the free play situation in the wh-question marker category. This was the only evidence of carry-over in the free play situation.

The findings of this study, which was exploratory and descriptive in nature, seemed to indicate that certain grammatical structures could be taught to young children from low socioeconomic backgrounds. Throughout the program the children seemed to evidence a new interest in words and groupings of words.

86. Bailey, Gertrude Marie. The Use of a Library Resource Program for the Improvement of Language Abilities of Disadvantaged First Grade Pupils of an Urban Community. Boston College, 1969. 225p. Adviser: Dr. Mary D. Griffin. 70-3369.

The purpose of this study was to determine whether participation in the activities of a library resource program would improve the psycholinguistic abilities of a group of disadvantaged first grade pupils from an urban community. Twenty-five children for the experimental group and twenty-five children for a control group were selected randomly from the disadvantaged population of one school in a low-economic urban area. In order to provide a second basis of comparison, twenty-five first grade children from more economically favored residential areas of the same city were used as a second control group.

In the study, selected activities using children's books and story-telling devices were organized to form a library resource program. The children in the experimental group participated in the activities of the library resource program at the beginning of the school year for one hour a day, five days a week, for sixty school days which was considered a twelve-week period. The children of the disadvantaged control group and the children of the non-disadvantaged control group did not participate in a library program nor in any other experimental program but continued in a curriculum program traditionally designed and accepted for first grade.

The Pintner-Cunningham Primary Ability Test was used to determine

the mental ages of the children in the three groups before the start of the study. The entire battery of the Illinois Test of Psycholinguistic Abilities (ITPA) was administered to all subjects in the study individually at the beginning of the experimental program and again at the end of the experimental period.

The one-way analysis of covariance was used to determine the significance of the difference between the mean posttest scores of the groups, with the influence of mental age scores and pretest scores parcelled out. Results of the analysis for the nine subtests and total ITPA score were as follows: 1) The experimental group scored significantly higher than the disadvantaged control group on Visual Decoding, Motor Encoding, Vocal Encoding, and total ITPA; the experimental group also scored significantly higher than the non-disadvantaged-control group on Vocal Encoding. 2) The non-disadvantaged control group scored significantly higher than the disadvantaged control group on several subtests; the only subtest on which the non-disadvantaged group scored higher than the experimental group was Auditory Decoding. 3) No difference was found among the three groups on Auditory-Vocal Automatic, Auditory-Vocal Sequential, Visual-Motor Sequential, and Visual-Motor Association.

Based on the findings in the study, it was concluded that: 1) the disadvantaged children who participated in the activities of the library resource program showed a significant increase in total language ability when compared with the disadvantaged children who had no library program; 2) the children who participated in the activities of the library resource program showed the most significant gains in the ability to express ideas; 3) on tests which require memory for linguistic symbols there was no difference in the gains made among the groups; 4) on several tests the non-disadvantaged group who participated in the traditional curriculum program showed a significant gain when compared with the disadvantaged group who also participated in the traditional first grade program; 5) on the test of ability to understand spoken words, the non-disadvantaged group showed a gain that was significantly greater than that made by either the disadvantaged control group or the disadvantaged experimental group.

It is therefore recommended that intensive use of children's books and story-telling devices, such as the activities of the library resource program, be employed to improve the language ability of disadvantaged children as they enter first grade. Highly recommended, also, is the planning and testing of other programs designed to provide meaningful experience with words, to improve oral expression, and to develop memory for linguistic symbols of disadvantaged children before the children are introduced to reading.

87. Hammer, Elizabeth Foster. A Comparison of the Oral Language Patterns of Mature and Immature First Grade Children. Arizona State University, 1969. 145p. 70-11,883.

The major purpose of this study was to ascertain if there are significant differences in the frequency of use of movables and connectors

in the oral speech patterns of mature and immature children from middle and low socio-economic levels.

The population consisted of two hundred thirty-four beginning first grade children from three elementary schools in the Phoenix, Arizona, area. All children constituting the population were divided into four sub-populations of mature middle class, mature low class, immature middle class, and immature low class. From each of these sub-populations, fifteen children were randomly selected so that a total of sixty children comprised the sample.

The Warner-Meeker-Eells Index of Status Characteristics classified children into middle and low socioeconomic levels. Maturity or immaturity in terms of readiness for beginning reading instruction was determined by readiness tests and the teachers' evaluations. Only those subjects who were clearly mature or immature remained in the population. The Indiana Conference Scheme was used to divide each child's speech into elements of five movables and connectors, as follows:

M₁--Movables denoting place.

M₂--Movables denoting time.

M₃--Movables denoting manner.

M₄--Movables denoting cause.

M₅--Prepositions plus indirect objects.

C--Connectors which join a causative subordination to the rest of a sentence.

Each of the sixty children of the sample was interviewed individually by the researcher. The child was shown the same five stimulus pictures and was asked to tell a story about each picture. No cues were given, but reluctant children were encouraged to talk. An inconspicuous tape recorder reproduced the conversations.

The sixty taped interviews were then transcribed and scored in accordance with the standards of the Indiana Conference Scheme. A frequency count was made of the number of times each child used each movable and connector. By totaling the frequencies for the sub-samples, data was gathered as to the number of times each group used each movable and connector, as well as the total of all movables and connectors. These sub-group totals were analyzed statistically by the use of the Mann-Whitney U Statistic to determine if there were significant differences between middle and low socioeconomic groups of mature subjects, and between middle and low socioeconomic groups of immature subjects.

The data revealed that, among mature first grade subjects, there is a clear difference in the frequency of use of movables and connectors, with the advantage going to the middle class mature children. These differences were statistically significant in the use of the movables denoting manner and cause as well as in the total frequency of all movables and connectors.

When immature subjects of both middle and low socioeconomic levels were compared statistically, there were no significant differences in the frequencies of any of the movables or connectors. Not only were the two immature groups much alike in their use of these patterns, but neither group had a clear-cut superiority over the other.

From the findings of this study, it seems accurate to say that socioeconomic level does not play a major role in the acquisition of movables and connectors in the speech patterns of immature children, but does not play an important part in the acquisition of such patterns in the speech of mature children. Maturity seems to be required before the child benefits linguistically from a more fortunate socioeconomic environment. It would also appear that all children use some movables and connectors in their speech patterns by the time they enter first grade; but that the rate of acquisition of these patterns depends not only upon socioeconomic level but also, with some children, upon maturity.

88. Hefter, James Arnold. An Evaluation of a Summer Preschool Program for Five-and-Six-Year-Old Culturally Deprived Children in the Lamar Independent School District of Texas. University of Houston, 1970. 112p. 70-18,023.

The purpose of this study was to carry out the evaluative design of the subject project and to determine (1) whether the project succeeded in improving the measured academic potential of the participants and, if so, to what degree, and (2) whether there was justification for specialized teaching of language and psycholinguistic development as compared with self-contained classrooms.

Two experimental groups and a control group were defined. Experimental Group 1 (E1) consisted of 75 participants who were taught by specialists in language and psycholinguist development. Experimental Group 2 (E2) included 75 participants who were taught in self-contained classrooms. Control Group (C) comprised 75, culturally deprived first-graders who entered school for the first time in September, 1967, and who had not participated in the summer program. Pupils in each of the groups were randomly selected, and randomness of selection was verified by t-tests of class size, Kolmogorov-Smirnov two-sample test of goodness of fit, Kolmogorov-Smirnov single-sample test for goodness of fit, and Hartley's test for homogeneity of variance.

E1 and E2 were pretested at the beginning of the program and posttested ten weeks later at the end of the program, and C was tested three weeks after the end of the program, using the Heath Rail-Walking Test, Goode-nough Draw-a-Man Test, and the following subtests of the Wechsler Pre-school and Primary Scale of Intelligence (WPPSI): Vocabulary, Information, Similarities, Comprehension, Sentences, Designs, and Verbal I.Q. C Group scores were assumed to have remained static during the program, since administrative considerations in the school district precluded actual pretesting of C.

Analysis of variance and t-test comparisons were made to determine whether any significant differences existed between E1 and E2 at the beginning of the program. Posttest scores were similarly analyzed and compared to C to determine whether there were any significant differences between E1, E2, and C at the end of the program.

Preliminary tests of significance of data verified the random character of the E groups, and that of C was assumed on the basis of similar demographic background. Pretest scores for E1 and E2, and scores for C revealed no significant differences among the groups, except on the Heath Rail-Walking Test, which was teacher-scored.

Posttest scores showed E1 and E2 to be significantly superior to C in all tested areas except WPPSI Sentences and WPPSI Designs subtests. In five of the nine areas, the E groups were superior to C at the 1% level. No significant difference in improvement was found as between E1 and E2.

The project was judged to have been successful in improving the measured academic potential of the participants. Justification for the specialized teaching of language and psycholinguistic development could not be inferred from the statistical yield of the study, but a trend, not statistically supportable, indicated a need for further research, possibly with a program of longer duration.

89. Vogel, Phyllis Palmer. A Comparative Survey of the Morphology of Lower Class Rural Kindergarten Students in Alachua County, Florida. The University of Florida, 1970. 126p. Adviser: Dr. C. G. Hass. 71-13,466.

This study in 1969-70 investigated morphological (language) proficiency in relation to intelligence, race, and sex in a lower class rural kindergarten population in Alachua County, Florida. One hundred and forty-five subjects, Negro and white, male and female, were grouped in terms of high-, middle-, or low-intelligence using raw scores on a portion of the Kuhlmann-Anderson Intelligence Test, Seventh Edition, Booklet K. The subjects were then individually administered a 20-item adapted version of the Berko Morphology Test, with responses taped and transcribed in writing.

Analysis of data included item and factor analyses of the adapted Berko Test, multiple linear regression analysis, and non-statistical content analysis of test responses. Item analysis rejected one test item as too difficult. Factor analysis revealed no emergent factor a result attributed to unequal distribution of the dichotomous data and to the fact that the instrument was used across race.

Multiple linear regression analysis rejected at the .05 level the hypotheses that (1) there would be no significant difference in morphological proficiency among the three intelligence groupings, and (2) there would be no significant difference in morphological proficiency between the two races. Analysis did not reject the hypothesis that there would be no significant difference in morphological proficiency between the two sexes. Significant interaction effects were found between and among the three variables.

Content analysis revealed one Nonstandard morphology pattern: An average of 7.4 percent of respondents in 29 of 36 group tabulations

gave the present participle, without auxiliary, in response to items measuring verb formation. For the test as a whole, the prevailing Nonstandard Response was the uninflected form of the word in question. In 35 of 38 group tabulations, the percentage of Negro students using the uninflected form was higher than the percentage of white students using it. Analysis also supported findings of other research that noun formations are easier for children than verb formations and indicated that for 16 of 19 test items Negro children had a higher "No Response" frequency than white children.

Results of this study in a population controlled for socio-economic level, geographic distribution, and age-grade level showed a significant relationship between morphological proficiency and intelligence and race. Supporting other current findings in the literature, results showed no significant relationship between language proficiency and sex.

Implications suggest the need for additional refined test instruments for intelligence and language, appropriate for use with lower class rural southern subjects. Results also suggest a great need for descriptive linguistic study of adult speech in the rural south, without which the meaning of the racial language cannot be fully interpreted.

90. Amdur, Jeanette Lorraine Read. Oral Language Abilities in a Low Socio-Economic Status Kindergarten Spanish-Surnamed Population Varying in Reading Achievement. University of Denver, 1971. 108p. 71-21,557.

The purpose of this study was to investigate the relationship of oral language performance to reading achievement within a group of lower socio-economic status, kindergarten Spanish-surnamed children. The Patterning among five oral language processes--auditory discrimination, auditory memory, receptive vocabulary, verbal expression and grammatical closure--was examined.

Thirty children with intelligence quotients on the Raven's between the twenty-fifth and seventy-fifth percentile were divided into three achievement levels based on reading cores on the Wide Range Achievement Test (WRAT). Level I had WRAT standard scores above 100, Level II WRAT scores between 90 and 100 and Level III WRAT scores below 90. The levels did not differ significantly as to age and I.Q. An overall analysis of variance indicated a significant effect due to achievement level ($p < .005$) and tests ($p < .001$). Analysis indicated the achievement level effect was due to the difference between Levels I and II on the one hand and Level III on the other. Levels I and II did not differ significantly. Analysis of the test effect indicated that the auditory discrimination scores (Wepman) were significantly higher than scores on all the other tests except verbal expression on the Illinois Test of Psycholinguistic Abilities (ITPA) and that the scores on the grammatical closure test (ITPA) were significantly lower than scores on all the other tests. The scores on the verbal expression, auditory memory (ITPA) and receptive vocabulary (Peabody) did not differ significantly. This oral language patterning was found to be consistent over achievement levels.

Analysis of each test over achievement levels indicated that scores on two tests, receptive vocabulary and auditory discrimination, differed over achievement level. Both tests discriminated among all three levels. Further analysis of each individual test was made. There were no significant differences in scores on the first and second half of the auditory discrimination test. When responses on the verbal expression test were placed in five categories, all subjects made proportionally more concrete than abstract responses (on one of two abstract categories), with function responses the most common. Subjects in Levels I and II, however, made proportionally more use of abstract categories than did Level III subjects. Analysis of the receptive vocabulary test indicated that Level III subjects made proportionally more noun errors between basal and ceiling than did subjects at Levels I and II, suggesting that the low achievement group not only had poor vocabularies but also had greater gaps in their vocabularies. There were no significant differences among achievement levels in the proportion of verb errors. In addition, scores on the test did not correlate significantly with any other measure. The grammatical closure subtest was rescored; counting as correct regular endings, where irregular ones were called for. Analysis indicated no significant differences among achievement levels, though significant intercorrelations with achievement (.357), receptive vocabulary (.356), and auditory discrimination (.366) were found, suggesting that for children who have not heard correct grammatical forms, a measure of grammatical performance does not reflect competence and that it is competence that is related to achievement and to other oral language measures.

Intercorrelations of all measures suggest that the primary deficit in this sample of children was that of receptive vocabulary. All measures except the original scores on the grammatical closure subtest correlated significantly with receptive vocabulary.

The results of this study were discussed in terms of other studies of low socio-economic groups, particularly those of Jensen and Deutsch. The high auditory discrimination score of this group, which was unique to this study, was suggested as having been due to the selection criterion relative to I.Q., as both low and high I.Q. subjects were eliminated from the sample.

Reading and Mathematics

91. Asbury, Charles Alexander. Factors Associated with Discrepant Achievement in Rural Economically Deprived White and Negro First Graders. University of North Carolina at Chapel Hill, 1969. 156p.
Adviser: Roy E. Sommerfeld. 70-12,040.

This study assessed the bearing of a number of cognitive, maturity, and sociological background variables, on the achievement status of rural white and Negro first graders. Cognitive variables included processes measured by the Primary Mental Abilities Test (PMA), Preschool Inventory (PI), Peabody Picture Vocabulary Test (PPVT), and the Metropolitan Readiness Test (MRT). Four subscores on the Metropolitan Achievement Test (MAT) were used as criterion measures of achievement. These were word knowledge, word discrimination, reading, and arithmetic; each being considered as a separate achievement domain.

Maturity was represented by a composite attainment quotient on the Preschool Attainment Record (PAX).

Sociological background variables were family size, socio-economic status, and ordinal position of the child in the sibling hierarchy.

Subjects were 225 first graders in a small, rural, community in North Carolina.

Cognitive and maturity instruments were administered to pupils at the beginning of the school year. The MAT was administered at the end of the school year. A random sample of fifty subjects was then used to develop separate regression equations for predicting each subscore on the MAT from total score on the PMA.

Subjects were then selected from the remaining 175 pupils on the basis of their classification as over- or underachievers in each of four achievement domains represented by the MAT subscores. Classification was based on whether a pupil's obtained subscore differed from his predicted subscore by at least ± 1.00 standard error of estimate and resulted in research subgroups corresponding to each achievement domain.

A three-way multivariate analysis of variance was used to test for significant differences and interactions between achievement levels, sexes, and races on the initial tests of cognitive and maturity status. The Chi square test of independence was used to study association between achievement level and each of the socio-logical background variables.

Findings were sufficient to justify the following major conclusions:

Cognitive Variable Conclusions:

1. Achievement Level. In the achievement domains of word knowledge, word discrimination, and reading, there were no cognitive differences between overachievers and underachievers.

In the arithmetic domain, overachievers were superior to underachievers on the PI subtests measuring numerical and sensory concept activation.

2. Sex. In the word knowledge domain girls were superior to boys in the PMA spatial subtest.

In the word discrimination domain girls were superior to boys on the MRT, PMA spatial subtest, PMA numerical subtest, PMA perceptual subtest, and PI subtests measuring personal-social responsiveness, numerical concept activation, and sensory concept activation.

In the reading domain there were no cognitive differences between sexes.

In the arithmetic domain girls were superior to boys on PMA perceptual subtest and the PI subtest measuring association vocabulary.

3. Race. In each achievement domain whites were superior to Negroes on all cognitive variables except two.

In the word discrimination domain there were no race differences on PMA perceptual subtest and PI persons' social responsiveness.

In both the reading and arithmetic domains there were no race differences on the PMA perceptual subtest.

4. Interactions. In the reading achievement domain, Negro males were superior to Negro females on the MRT and PPVT, while among whites, females were superior to males on the same variables.

In the arithmetic domain white overachievers were superior to white overachievers on the PPVT, while among Negroes, overachievers were superior to underachievers on the same variables.

Maturity Variable Conclusions

1. Achievement Level. In the reading domain, overachievers were more mature than underachievers.

2. Sex. There were no maturity differences between sexes.

3. Race. In all achievement domains, whites were more mature than negroes.

4. Interactions. There were no significant interactions of any type.

Sociological Variable Conclusions

1. In no achievement domain were family size and socio-economic status found to be related to discrepant achievement.

2. In the arithmetic domain ordinal position was related to achievement with first born children tending to be overachievers and later born children tending to be underachievers.

92. Campbell, Myra Grace. Prekindergarten Training and Its Relationship to the First Grade Reading Achievement of Educationally Disadvantaged Children. University of Southern California, 1969. 179p.
Adviser: Professor Naslund. 70-8519.

The purpose of this study was to investigate the relationship between prekindergarten training and readiness and achievement in first grade of children thought to be educationally disadvantaged.

The data were obtained from the administration of three standardized tests: (1) the Peabody Picture Vocabulary Test administered at the beginning of the fall term to 2,144 kindergarten registrants, (2) the Metropolitan Readiness Tests, at the beginning of first grade, (3) the Stanford Achievement Test, Reading, and the Peabody Picture Vocabulary Test retest at the end of first grade.

A sample of 320 subjects from the 974 remaining in the population at the conclusion of the two-year data collecting period, half boys and half girls, was randomly selected from the sixteen week, eight week, and nonprekindergarten subjects. Comparisons were made between: (1) a group which experienced sixteen weeks of prekindergarten training and its nonprekindergarten counterpart, (2) a group which experienced eight weeks of prekindergarten training and its nonprekindergarten counterpart, and (3) the two prekindergarten groups.

Factorial analysis of variance was used to compare each of the two prekindergarten groups, with its nonprekindergarten counterpart on all four of the dependent variables. Analysis of covariance for factorial design was used to compare the two prekindergarten groups on the four dependent variables.

Findings. Comparisons between the sixteen week prekindergarten group and its nonprekindergarten counterpart indicated that: (1) all main effects, treatment, sex, and IQ, from analysis of variance were significant on all four dependent variables except treatment on the Metropolitan and sex on the Stanford; (2) significant differences favored the sixteen week prekindergarten group except that the nonprekindergarten counterpart had the higher ability at the end of first grade; (3) boys in both groups had higher ability than did girls in both groups; (4) girls in the two groups had higher reading readiness mean scores than did boys in the two groups at the beginning of first grade; and (5) the sixteen week prekindergarten group achieved a reading mean score significantly higher at the end of first grade than did the higher ability nonprekindergarten counterpart.

Comparisons between the eight week prekindergarten group and its nonprekindergarten counterpart indicated that: (1) all main effects from analysis of variance were significant on all dependent variables except sex on the Metropolitan and treatment on the first grade Peabody; (2) all significant differences favored the eight week prekindergarten group; (3) boys in both groups had higher ability than did girls in both groups at the beginning of kindergarten and at the end of first grade; and (4) the eight week prekindergarten group achieved a reading mean score at the end of first grade significantly higher than that of its nonprekindergarten counterpart.

Comparisons between the two prekindergarten groups indicated that: (1) all main effects from analysis of covariance were significant on all four dependent variables except treatment on the kindergarten Peabody and sex

on the first grade Peabody; and (2) all significant differences favored the eight week prekindergarten group.

Conclusion. Prekindergarten training was related positively to first grade reading achievement with respect to the educationally disadvantaged groups studied.

Recommendations. Research is needed: (1) to establish optimum lengths of prekindergarten training for disadvantaged groups with specific characteristics, and (2) to identify instructional techniques, approaches, or whatever to bring both the readiness for reading and the beginning reading achievement of the educationally disadvantaged into a relationship more closely aligned with their ability:

93. Pickering, Charles Thomas. A Study of Intellectual Abilities of Culturally Disadvantaged Children as Predictors of Achievement in Reading, Mathematics, and Listening in Grade One. Ohio University, 1969. 71p. Adviser: Albert H. Shuster. 70-15,289.

Studies of the effects of cultural deprivation on intellectual functioning and school achievement indicate that disadvantaged children fall farther behind other children in measured intelligence and in school achievement as these disadvantaged children progress through the grades. Although such research has been done in the area of cultural deprivation, more research is needed to determine specific intellectual characteristics of disadvantaged children which can be directly related to poor school achievement. And the earlier in life that children can be identified on the basis of such intellectual characteristics, the more likely it is that efforts to reduce the effects of cultural deprivation will be successful.

This study dealt with six intellectual characteristics (or areas of intellectual functioning) which are included in the Written Exercises of Let's Look at Children (Educational Testing Service, Princeton, New Jersey, 1965): (1) Shapes and Forms, (2) Spatial Relations, (3) Time Concepts, (4) Understanding Mathematics, (5) Communication Skills, and (6) Logical Reasoning. The main purpose of the study was to determine empirically which combination of these six areas (as measured by the six tests) could best be used to predict school achievement in reading, mathematics, and listening.

The six tests of Let's Look at Children and achievement tests in reading, mathematics, and listening (Cooperative Primary Tests, Educational Testing Service, 1967) were administered to a sample of 170 first grade students from a low socio-economic area in Appalachia. Multiple regression analysis was used in the analysis of the data. A computer program (BMDO2R, Stepwise regression) was used to form three multiple regression equations for predicting achievement in reading, mathematics, and listening. Multiple correlation coefficients (R's) were calculated for each of the three prediction problems. An F ratio was used to test the significance of each R. All R's were significant at the .05 level of significance.

A different combination of the six independent variables was included in each of the regression equations. For predicting achievement in reading, Tests 3 (Time Concepts), 4 (Understanding Mathematics), and 6 (Logical Reasoning) were used. The resulting R was .58.

For predicting achievement in mathematics, Tests 2 (Spatial Relations), 4 (Understanding Mathematics), 5 (Communication Skills), and 6 (Logical Reasoning) were used. The resulting R was .78.

For predicting achievement in listening, Tests 3 (Time Concepts) and 5 (Communication Skills) were used. The resulting R was .74.

On the basis of the results of this study, the following conclusions were drawn:

1. The six tests of Let's Look at Children measure different aspects of intellectual functioning of culturally disadvantaged children. However, common factors of intelligence (as indicated by significant inter-correlations between the various pairs of these six tests) account for some of the variance in test scores.
 2. The six tests of Let's Look at Children can be used effectively to predict achievement for culturally disadvantaged children in grade one.
 3. A different combination of tests should be used to predict achievement in each of the three curricular areas (reading, mathematics, and listening).
 4. Three of the six tests of Let's Look at Children (Time Concepts, Understanding Mathematics, and Communication Skills) can be used to predict achievement in reading, mathematics, and listening with only negligible reduction in the accuracy of prediction.
 5. Reading achievement can be predicted with considerably less accuracy than can achievement in mathematics and listening.
94. Hamblin, Mary June Adams. The Effect of Token Exchange Instruction and Peer Tutoring on I.T.A. Reading Ability of Disadvantaged Preschool Children. St. Louis University, 1970. 67p. 71-3263.

Evidence found in a number of studies suggests that the child who learns to read at an early age is at a decided advantage in the classroom. He is already experiencing success with the single-most important task of his educational career. The purpose of this experiment is to develop and evaluate a method of teaching reading which makes early learning to read easy for the culturally disadvantaged child.

The problem investigated was as follows: To what extent does a token exchange system of classroom organization and management supplemented by peer tutoring during one summer session raise i.t.a. reading of VISTA preschool children?

The research design and procedure involved a two by two factorial design, and had the following characteristics: a) The reading materials were a series of primers in i.t.a. with picture illustrations prepared by the investigator. They had a simple story line and the visual world of inner city children; b) A token exchange with material backups was structured to motivate the children to learn to read. Tokens (plastic discs) were given the children as "earnings" for learning the symbols and words and, by successive approximations, for reading the story line. The tokens were redeemed at the end of the reading period for sundry tangibles such as cookies and small toys; and c) Systems of peer and adult tutoring were employed as the basic instructional techniques.

In this study, the high-to-medium I.Q. children read to criterion on the average 1.4 books when on free material reinforcers and tutored by adults--in this experiment the closest approximation to the traditional learning situation. If such children were involved in peer tutoring their reading achievement better than doubled to 3.1 books or if given tokens for reading (with adult tutors), their reading approximately tripled, to an average of 4.1 books. However such children's reading better than quadrupled to 5.5 books when involved in peer tutoring and given tokens for reading. Hence, the peer tutoring and the tokens had a very substantial effect on the average-to-bright inner-city preschoolers.

The low I.Q. preschoolers responded almost as well to peer tutoring and tokens for reading. Those without either read no books to criteria and learned no words to criterion. However, such children read on the average 1.4 and 1.1 books respectively in the eight weeks, if peer tutored or if given tokens for reading. If both peer tutored and given tokens for reading, the number of books read increased further to an average of 1.6.

Thus, the findings indicate that the children on both peer tutoring and a token exchange for reading did exceptionally well. The high-to-medium I.Q. children read about four times more and the low I.Q. children read about 1.2 times more than the high-to-medium controls. These are very substantial differences.

The methods, design and results of this study thus provide substantial information as to how early reading can most effectively be taught to the disadvantaged preschooler.

95. Skailand, Dawn Beverly. A Comparison of Four Language Units in Teaching Beginning Reading. University of California, Berkeley, 1970. 118p. 71-9747.

The purpose of this study was to measure the comparative effectiveness of four language units in producing recall and transfer of words and syllables by kindergarten children.

The four language units and approaches used were the grapheme/phonème (with letter-by-letter analysis), the morpheme (with similar spelling patterns), the morphophoneme-morphographeme (with contrasting spelling patterns) and the whole word (sight approach).

The null hypothesis was tested for differences in the recall and transfer scores. Comparisons were made of the effects of the four treatments on subjects varying in measured intelligence, sex, prior letter name knowledge, and prior knowledge of phonemes.

The sample consisted of four kindergarten classes containing 86 subjects with the recall composition of 76 per cent Negro, 13 percent Spanish (surname), 10 per cent Other Caucasian, and 1 per cent Oriental.

Pretests were administered which yielded scores in intelligence, letter name knowledge, and phoneme knowledge. After ranking by intelligence scores, subjects were randomly assigned to one of the four treatments. Twice weekly for ten weeks beginning in January 1970, subjects were taught in groups of approximately six pupils each. The content for the 15-minute lessons was a list of 28 words and syllables. Posttests were individually administered, with scores recorded for recall of the 28 words and syllables taught, and for transfer to 26 similar words and syllables. The transfer words and syllables contained correspondences identical to

those in the instructional word list.

The .05 level of significance was used to assign F ratios and Scheffe Contrasts as post hoc comparisons.

The major effects of the study were dual. The recall test findings favored the two spelling pattern treatments. The transfer tests yielded scores which were not significantly different for any of the treatments.

Exploratory questions on recall found that the following subgroups performed better when they had been taught in the morpheme group, with similar spelling patterns: subjects with low measured intelligence; subjects with high letter name knowledge; subjects with little phoneme knowledge.

Questions on transfer revealed that both of the spelling pattern treatments were more effective than the grapheme-morpheme or whole word treatments for two subgroups: girls and subjects with little letter name knowledge. Subjects with low measured intelligence performed best in the similar spelling pattern treatment (morpheme).

The conclusion was made that beginning reading instruction should employ language units which provide for spelling pattern emphasis.

96. Spollen, Joseph C. The Effect of Individualization of Instruction on Cognitive and Perceptual Functioning of Kindergarten Children with a Developmental Lag. Fordham University, 1970. 125p. Adviser: Bonnie Ballif. 71-20.

The study sought to determine effectiveness of individualization of instruction for kindergarten children displaying a developmental lag through comparison with a control group enrolled in a regular kindergarten program. Criterion variables were in the areas of general development, visual perception, language, and general readiness. Additionally, comparison of the children displaying a developmental lag and a group of developmentally normal children was made in terms of general readiness.

Subjects were selected from a population of 717 entering kindergarten children in a suburban school district. Based upon the results of a developmental screening pretest, 135 students were classified as possessing a developmental lag. Ninety were assigned to the individualized program and constituted the experimental group. Forty-five were placed in a normal kindergarten environment and served as a control group. A second control group consisted of 45 randomly selected developmentally normal subjects from the population of 717 children.

Children attended school for two-and-one-half hours per day. The eight experimental classes had approximately 12 children each, a teacher, and a teacher-aide. Individualization was stressed in the areas of language, perception, and motor development. Areas of emphasis and sequence of skill presentation were dependent upon on-going diagnosis of individual needs. The control groups consisted of eight classes with approximately 25 children each and one teacher per class. A two way classification analysis of covariance was used to test significance of mean differences between experimental and control groups by treatment, sex, and interaction between treatment and sex.

Criterion measures were total scores on the Developmental Screening test, the Frostig Developmental Test of Visual Perception, selected subtests of the Illinois Test of Psycholinguistic Ability, and the Metropolitan Readiness Test. In addition, significance of mean readiness scores differences between experimental, control, and developmentally normal groups were treated by a single classification analysis of variance.

Finally, Pearson Product-Moment correlations were computed to determine the relationship between the criterion measures and the developmental Screening test. A posttest control group design was employed in the study.

There were no significant mean score differences between the experimental and control group by treatment, sex, or interaction between treatment and sex on any of the criterion measures. Significant mean score difference in general readiness scores in favor of the developmentally normal group were obtained when compared to the experimental and control groups. Significant Pearson Product-Moment correlations were obtained between the Developmental Screening test and all criterion measures.

Lack of significant differences in cognitive growth between experimental and control groups indicated that the individualized program lacked sufficient scope or intensity to effect significant change. The significantly higher general readiness scores of the developmentally normal group showed that initial developmental differences were not overcome by the kindergarten programs. Effective intervention programs may require participation for more than one year and might warrant the inclusions of highly structured sequences of skills development in the cognitive realm. Furthermore, intervention at an earlier age would allow for programs of greater length, perhaps at a time more appropriate to development of basic cognitive structures. However, it is also possible that kindergarten intervention programs cannot reverse innate differences in developmental level.

The recommendations made following the conclusion of the study included replication for cross validation purposes; usage of noncognitive variables as criterion measures of growth in the affective domain; modification of the experimental program to include small group instruction in specific cognitive areas as a supplement to the existing program; a longitudinal study to determine the program's influence on school achievement; and inclusion of an objective measure of language level for the Developmental Screening Test.

97. Adams, Ann Arnold. The Effects of Planned Background Experiences on Economically Disadvantaged Kindergarten Children. Mississippi State University, 1971. 61p. Adviser: Dr. Aubrey W. Shelton. 72-4359.

The purpose of this study was to determine if the reading achievement, intelligence quotients, and recognition of 46 common nouns of low-income first grade children would be significantly affected by the provision of certain planned experiences. These experiences were based on the vocabulary and story activities of the preprimers, junior primer, and primer used by the children in the first grade.

One-hundred thirty Negro children from economically disadvantaged areas in a Mississippi town were included in the sample. Forty-five children in the experimental group and 45 in Control Group A attended an eight week summer school program. These were all children who in the following fall entered first grade for the first time. Control Group B consisted of 40 entering first graders who had not attended summer school classes.

All of the children were given the Metropolitan Readiness Test. In addition they were all pretested and posttested with the Vocabulary Test designed by the researcher, Scott, Foresman's Basic Reading Test on the primer level, and the California Short Form Test of Mental Maturity, 1963

edition, Level 0. The results of these tests were used to test the hypotheses.

During summer school the experimental group met through actual experiences some of the activities and all the common nouns presented in Scott, Foresman's preprimers, primer and junior primer. At least two activities engaged in by the story characters in each of these five books were participated in by the children in the experimental group. Through planned experiences each of the 46 common nouns taught in these books were introduced to the experimental group. In all other respects the four classes that composed Control Group A had the same instruction and activities as the four experimental classes. To help prevent a systemized intervention of teacher variables, the eight summer school teachers were paired as closely as possible on the bases of sex, age, race, number of years of teaching experience, number of years of teaching on the primary level, college training and certification. From each pair one teacher was randomly selected for a class in the experimental group and one for a control class.

Analysis of covariance was used to eliminate pretest differences in readiness scores, ages, language IQ scores, and non-language IQ scores.

Four null hypotheses were stated. The factors of word recognition, reading achievement, and language and non-language IQ scores were considered. Based on data analyzed in this study, the following conclusions were reached:

1. There was no significant difference in the recognition of the 46 common nouns found in the preprimers, junior primer, and primer of the basal readers of the group of children receiving the experiences related to the readers and of either group of those who did not receive these experiences.
2. There was no significant difference in the reading achievement of the group of children who received experiences related to the vocabulary and activities of the basal readers and of either group of children who did not receive these experiences.
3. There was no significant difference in the language IQ scores of any of the three treatment groups in this study.
4. There was no significant difference among the three treatment groups' non-language IQ scores.

98. Carrico, Mark Andrew. An Assessment of the Children's Television Program Sesame Street in Relation to the Attainment of the Program's Goals by Kindergarten Children in the Sioux Falls, South Dakota Public Schools. University of South Dakota, 1971. 233p. Advisor: Professor Robert W. Wood. 71-27,813.

The purposes of this study were: (1) to determine the attainment of Sesame Street's stated educational goals by kindergarten children in the Sioux Falls, South Dakota Public Schools who viewed the program regularly during the 1970-71 season; (2) to compare the goal attainment of kindergarten children who viewed the program regularly with the attainment of children who did not view the program; (3) to determine how kindergarten teachers in the Sioux Falls Public Schools regard the impact of Sesame Street and how they regard the program qualitatively; and (4) to survey the parents of children who viewed the program regularly in relationship to what degree they felt the program was helpful to their

child.

Eight elementary schools that provided a representative socio-economic cross-section of all areas of Sioux Falls were selected for the study. Four of the schools where a majority of children were not able to view Sesame Street due to lack of reception served as control schools. The experimental schools were four schools where a large number of kindergarten children were viewing Sesame Street. 45 kindergarten children were included in each group for the analysis of the data that was carried out. The 45 children in the experimental group viewed Sesame Street regularly for 15 weeks and children in the control group did not view the program.

The control and experimental groups were not matched in intelligence, so the analysis of covariance research technique was used to statistically control initial differences in the variability of the two groups. A test was designed from the behavioral goals of Sesame Street. The test covered five areas: (1) recognition and use of reading symbols; (2) recognition and use of numerical symbols; (3) knowledge of geometric forms; (4) body parts; and (5) cognitive skills. A reliability coefficient of .886 was established for the test through a test-retest administration of the instrument to 20 kindergarten children in the Vermillion, South Dakota Public Schools. Null hypotheses were established for each of the five subtests and the composite test scores. The statistical analysis that was carried out used the pre-test scores as a covariate. The testing instrument was administered after 15 weeks with post-test scores being the dependent variable upon which the analysis was based.

The study included a 22 item questionnaire for kindergarten teachers in the Sioux Falls Public Schools. The questionnaire was designed to elicit a yes, no, or no opinion response to questions dealing with the impact and quality of Sesame Street. 65 per cent of the teachers responded.

Parents of children in the experimental group were sent a 10 item questionnaire about Sesame Street. 96 per cent of the parents responded.

Findings

1. Sesame Street viewing had a measurable effect on achievement by kindergarten children in all five goal areas measured by the criterion measure. The differences on post-test scores between the experimental group and the control group were significant at the .001 level of confidence for four of the subtests and the composite test scores. The significance of the difference between the two groups was beyond the .01 level of confidence for the body parts subtest.

2. Recognition of the 20 vocabulary words and ability to carry out consonant substitutions as presented on Sesame Street increased only minimally in the experimental group.

3. The analysis of the post-test scores indicated that the statistical difference in favor of the group viewing Sesame Street was most significant for the cognitive skills subtest. This subtest measured goal areas related to various thinking skills that Sesame Street is attempting to foster.

4. On 20 of the 22 kindergarten teacher questionnaire items at least 80 per cent of the teachers were favorable to Sesame Street. The use of slapstick humor and the antics of the puppets used to portray monster characters were the items that drew a divided reaction among the teachers.

5. Parents of children viewing Sesame Street rated the program as doing a very good to excellent job of accomplishing the job of teaching the educational curriculum it was designed to teach. None of the ten items on the questionnaire for parents was rated unfavorably.
99. Holovka, Edward Andrew. The Frostig Developmental Program: Prediction and Follow-Up of First Grade Remediation with Later Reading. Wayne State University, 1971. 98p. Adviser: Dr. Paul Sullivan. 72-14,571.

Numerous authors report data showing a high relationship between visual perception and early reading. Frostig and colleagues have reported a promising method of identifying and remediating visual perception deficiencies. This study was concerned with the prediction of later reading from early Frostig test scores and the determination of existing relationships between Frostig treatment and reading skills two years later.

All beginning first graders ($N=274$) in five semi-rural, predominantly white schools were tested in small groups of five with the Developmental Test of Visual Perception (DTVP). Group achievement test results were obtained on 139 of this group two years later. The perceptual quotient (P.Q.) in first grade correlated .53 with reading at the beginning of third grade, with correlations of .41 found with spelling and .67 with the California Test of Mental Maturity. Subtests III (Form Constancy) and V (Spatial Relations) contributed most to these correlations (.44 with reading). From the total group, 48 (or 18%) were found with perceptual quotients at or below 90 which, according to Frostig's criteria, require special perceptual training.

Those 24 children who received 40 hours of small-group Frostig treatment made significant gains over the matched-pair controls using the DTVP scores as criterion measures. Because the treatment and control groups could not be maintained over time, a mixed group of children resulted who had received varying amounts of Frostig training, 40, 55, or 95 sessions, over a one or two semester period. Classroom teachers who had children in this program perceived those immediate gains from the Frostig program as more related to classroom orientation factors, such as improved listening skills and following directions, or emotional factors, such as improved self-confidence. The DTVP alone appears to be inadequate as the sole selection instrument for identifying children with a primary visual-perception deficiency, including a significant number of children of dull-normal to mild levels of intellectual retardation, children with significant emotional problems, and some with visual impairment. The less intelligent children tended to remain longer in the program, some receiving a double dosage of Frostig training, but with minimal further gains.

Twenty-eight children who received Frostig treatment were located at the end of third grade and individual measures of intelligence and reading achievement were obtained. With this small group of treatment children, Frostig change score, or improvement, did not correlate significantly with reading two years later. This, in conjunction with previous research, would cast some doubt on the efficacy of the Frostig program for improving later reading skills. However, the small sample size, plus inherent limitations in this form of analysis, makes this a highly tenuous conclusion for which more controlled study is needed. The Rubin Behavior Checklist, filled out by the teacher prior to Frostig training,

correlated .49 with later reading and shows promise as a measure of classroom disorientation and other factors related to reading achievement. Combing this checklist score with the Frostig pretreatment P.Q. in a multiple correlation results in an R of .65 with later reading.

More sophisticated diagnosis of the primary visual-perception deficiency and a "continuous support" model of prescriptive teaching recommended by Barbara Bateman appears needed to remediate early reading problems.

100. Jones, Marian Ilene. An Analysis of Preschool Children's Responses to Voluntary Participation in Story-Reading Sessions. Arizona State University, 1971. 117p. Adviser: Dr. Donald E. O'Beirne. 71-26,591.

This study was designed to analyze preschool children's responses to the opportunity for voluntary participation in story-reading sessions and to determine the effect of this voluntary participation in story-reading sessions upon the subsequent selection of books as a free choice activity.

Four questions were presented. Question 1 sought to discover the percentage of children in the treatment group who voluntarily chose to participate in story-reading sessions as one of a variety of available activities. Question 2 was directed at determining the percentage of the total number of stories offered to the treatment group in which the children would choose to participate. Question 3 investigated the difference between the number of children in the control and experimental groups who chose to look at books after the story treatment period; and Question 4 sought to determine the difference in the number of books handled by the control and experimental groups after the story treatment period.

Two groups of preschool children, four and five years of age, were specifically selected as the population for the study. Both classes were taught by the same teacher in the same classroom. The morning class served as the control group; the afternoon class having been identified as the experimental group.

For eleven sessions, which extended over a four week period, story-reading sessions were offered to the experimental group. These sessions consisted of the playing of tapes, approximately thirty minutes in length, on which had been recorded the story content of selected children's books. Illustrations in the books were displayed, and attendance in the group was voluntary.

After a week lapse period, ten observations, which extended over a four week period, were made in both the control and experimental groups to determine the number of children who chose to look at books as a free-choice activity and to determine the number of books handled by the children in both groups.

Conclusions were:

Question 1. It was found that 90 percent of the experimental group participated at least once during the treatment period for either part or all of at least one story session. Further analysis revealed that, of the possible-attendance days for the group, 35.5 percent were found to be child-participation days for either part or all of the offered story-reading sessions. Of the possible-attendance days, 3.5 percent represented participation in complete story-reading sessions.

Question 2. The percentage of possible-participation stories that were participated in by the group, either partially or in their entirety, was found to be 18.9. Of this figure, the percentages of complete-participation stories represented 11.9, and the percentage of partial-participation stories represented 7.0.

Question 3. It was found that there was no significant difference between the number of children in the experimental and control groups who chose books as a free choice activity after the story treatment period, and the null hypothesis was accepted.

Question 4. There was found to be no significant difference between the number of books handled as a free choice activity by the children in the experimental and control groups during the period of observation, and the null hypothesis was accepted.

101. Moe, Alden John. An Investigation of the Uniqueness of Selected Auditory Discrimination Skills Among Kindergarten Children Enrolled in Two Types of Reading Readiness Programs. University of Minnesota, 1971. 141p. Adviser: John C. Manning. 72-14,340.

The purpose of the study was to investigate the extent to which types of standardized reading readiness subtests measure unique aspects of auditory discrimination among kindergarten children. Also of concern was the extent to which the nature of the auditory training component of the readiness program would influence the relationship of the subtest scores.

Samples of students from two school districts employing highly dissimilar reading readiness programs were tested. One sample included 132 students from a structured reading readiness program where reading readiness instruction was systematically taught according to a curriculum guide which all kindergarten teachers were directed to follow. The second sample included 126 students from an unstructured reading readiness program whose teachers were not required to follow a formal course of study, but were free to provide instruction in reading readiness activities at their own discretion. Eight auditory discrimination subtests selected from published reading readiness tests were administered to both samples: the discrimination of beginning sounds in words and the discrimination of ending sounds in words subtests from the Clymer-Barrett Pre-reading Battery; the listening comprehension and auditory blending subtests from the Gates-MacGinitie Reading Tests; Readiness Skills; the making auditory discriminations subtest and the using context and auditory clues subtest from the Harrison-Stroud Reading Readiness Profiles; and the rhyming words and rhyming phrases subtest from the Wisconsin Tests of Reading Skill Development.

Three additional measures and chronological age were used as descriptive measures of the samples. These measures indicated that the unstructured reading readiness program sample was significantly superior in IQ. The structured reading readiness program sample, however, was significantly superior in knowledge of beginning consonant sound-symbol relationship. There was no difference found when compared on the basis of letter knowledge or chronological age.

With the exception of the Wisconsin rhyming words test, intercorrelations among the measures were generally statistically significant at the .01 level. Correlation matrices for the eight measures revealed that

the relationship of the variables (measures) was similar for either sex within sample and across samples, i.e., highest and lowest correlations were found among the same measure by sex within either sample.

Factor analysis for each sample which used the principal factor analysis (PFA) and the unrestricted maximum likelihood factor analysis (UMLFA) solutions yielded two factors which explained the variance of the variables.

Factor loadings for either sample, obtained by either method, PFA or UMLFA, revealed markedly similar patterns; the patterns were consistently similar when the samples were combined. The highest factor loadings on one factor were--in all cases--the Clymer-Barrett beginning sounds test, the Harrison-Stroud auditory discrimination test, and the Harrison-Stroud use of context and auditory clues test; the Gates-MacGinitie listening test and the Gates-MacGinitie blending test also loaded highly on this factor, but to a lesser degree.

The variable most highly related to the second factor was the Wisconsin rhyming words test.

The Clymer-Barrett ending sounds test and the Wisconsin rhyming phrases test had similar loadings on both factors.

The investigator reached the following conclusions:

1. With the possible exception of the Wisconsin rhyming words test, the tests used in this investigation do not appear to measure unique aspects of auditory discrimination among kindergarten children of either sex.

2. The nature of the kindergarten reading readiness program has little bearing on the interrelationship of the auditory discrimination skills under study in this investigation.

3. There was no evidence of sex differences in the identification of factors.

4. The factor with the higher loadings, the more prominent factor, can reasonably be described as a "beginning consonant sounds auditory discrimination factor."

5. The less prominent factor obtained can reasonably be described as a "rhyming sounds" factor.

6. In view of the consistency of the findings in two highly dissimilar reading readiness programs, the investigator has concluded that the auditory discrimination skills displayed by the children in this study were developed independent of systematic reading readiness instruction.

7. It appeared that if a kindergarten student possessed the phonological skills necessary to communicate with his peers he was able to perform well in the auditory discrimination measures administered in this investigation.

102. Strag, Gerald Anthony. Auditory Discrimination Techniques Useful with Culturally Disadvantaged Children. University of Georgia, 1971. 121p.
Adviser: E.P. Torrance. 72-2552.

The purpose of this study was to investigate the relative effectiveness of two instructional methods, imitative-reinforcement and instrumental conditioning, in teaching auditory discrimination to disadvantaged first and second grade children. Furthermore, the investigator was concerned with testing the effect that increased competency, on auditory discrimination tasks, would have upon the pupil's self-concept, self-es-

team and dependency. The subjects for this investigation were first and second grade children enrolled in an elementary school in Clarke County, Georgia. The children's auditory discrimination ability and self-concept measures were limited to those aspects measured by Wepman's Auditory Discrimination Test and Henderson's Social-Self Construct Test.

The methods of data analysis consisted of: 1. Analysis of variance in analyzing differences in mean error rates for pre- and post-test measures and in obtaining levels of significance for the auditory discrimination null hypotheses; 2. Item analysis was computed using error scores on the Wepman pre-test to identify test items which significantly discriminated between black and white students; 3. Factor analysis was obtained for the revised scoring techniques of Henderson's CSSCT.

The study demonstrated that compensatory programs concerned with auditory perceptual learning can be successful in helping culturally deprived children to discriminate between auditory cues. Significant differences were noted between both experimental sections when compared with in the control Ss for mean error differences on the Wepman Auditory Test. No significant differences were noted between experimental sections or between experimental and control sections on personality factors or measures of verbal intelligence.

103. Valdes, Alice Laura. The Effects of Training in Auditory and Visual Discrimination Skills on Reading Readiness and Intelligence in the Disadvantaged Child. Lehigh University, 1971. 96p. 71-27,745.

The purpose of this study was to determine the effect of training in auditory and visual discrimination skills on reading readiness and intelligence. The study was designed to answer two questions:

1. Will disadvantaged children with classroom training in auditory and visual discrimination skills have significantly higher measured intelligence than disadvantaged children who have not had such training?
2. Will disadvantaged children with classroom training in auditory and visual discrimination skills be significantly better able to begin to read than disadvantaged children who have not had such training?

The study involved 125 children at the kindergarten level in three schools in Wilmington, Delaware. All schools were located in depressed areas of the city. The children were assigned to teachers on an essentially random basis.

The three kindergarten teachers, each teaching one experimental and one control group, agreed that the experimental materials would be used as supplementary to the regular kindergarten activities with those children in the experimental group.

Early in the school year, all children were given the Lee-Clark Reading Readiness Test, the Metropolitan Readiness Test, the Lorge-Thorndike Intelligence Test, and the Wepman Auditory Discrimination Test. In May, the tests of readiness and intelligence were readministered.

Analysis of covariance was used in testing for treatment effect, in order to compensate for initial differences. In each instance, the pre-test was used as the covariate. The Wepman Test was used as an aid in analyzing the data.

Findings:

A significant difference was found to exist on the intelligence measure between the experimental and control groups when posttest means were compared. Further analysis using the Wepman scores seemed to indicate that those who benefited most were those who had less developed auditory discrimination skills at the beginning of the experiment.

No significant differences were found to exist between the experimental and control groups on either of the readiness test scores. When differentiated with respect to the Wepman scores, no significant differences were found to exist.

Surprisingly few of the children in the experiment were at an "adequate" level of development according to the norms supplied with the Wepman Auditory Discrimination Test.

The findings suggest that, while such training did not significantly improve readiness skills for disadvantaged kindergarten children, it did improve their performance on the Lorge-Thorndike Intelligence Test.

Behavior and Attitudes

104. Zion, Jean Raier Gilman. The Coping Responses of Nursery School Children: A Social Class, Developmental Comparison. Columbia University, 1964.
152p. 65-14,019.

In the recent past a number of studies of social class and personality in the United States have ascribed differences in personality and behavior to specific child-rearing practices characteristic of the social class groups compared. These studies, generally using school-age children or adults as subjects, tend to overlook the impact, on behavior and social attitude, of the life situation created by the individual's encounter with such secondary institutions of the culture as schools, communication media, and the occupational structure. In the United States, these secondary institutions are geared to a predominantly middle class culture, are extensions of a middle class point of view, and are administered by middle class individuals; the relationship of the lower-class individual to these institutions creates a life situation which is determined by his lower status in the stratification system. By elementary school age or over, class-linked differences in behavior may then more accurately be regarded as the individual's way of dealing with the specific life situation he encounters at his position in the stratification system. If social class differences in behavior are to be related to class-linked regularities in child-rearing practices, then the effect of the exposure to these secondary institutions of the culture would have to be ruled out.

In the present study, nursery school children belonging to two different social class groups were compared for the purpose of determining whether there are any significant differences in behavior in a population which has not yet been extensively exposed to these middle class secondary institutions.

A total of 280 white children, ranging in age from three to six years, in attendance at nursery schools in New York City, served as subjects. Four of the schools were designated as Day Care Centers by the New York City Department of Welfare; the other three were private nursery schools. Two social class groups were established on the basis of an occupational prestige scale adapted for this purpose.

An original picture-story test consisting of ten frustrating situations apt to be encountered by urban children of this age was individually administered. Verbatim responses to the test were classified into four major coping response variables: Active Coping, Passive Acceptance, Aggression and Non-adaptive responses.

Among the youngest children, ranging in age from 36 to 50 months, no significant difference was found between the coping responses of Class I and Class II. In the two oldest age groups (from 52 to 72 months), middle class (Class I) children tended more frequently to use substitute resources available to them as a means of coping constructively (classified as Active Coping) with deprivation. In contrast, the more typical Active Coping response of the lower class group (Class II) was to attempt to alter the source of the deprivation. When no expenditure of money was involved, Class II children substituted with equal frequency.

This difference in Active Coping style appeared to be related to the greater number of Aggression responses given by the oldest group (from 61 to 72 months) of Class II boys. A detailed examination of the picture-story test patterning of Active Coping and Aggression responses revealed that the situations which elicited higher percentages of Aggression responses from Class II boys were those involving the loss of a toy; the Class I boys were able to cope with the loss by suggesting replacement of the lost object.

The social class differences in coping responses were found to be very minimal in this age group. Such group differences as did appear, i.e., in the style of Active Coping response and in the greater number of Aggression responses in the oldest group of lower class boys, reflected social class differences in assumptions about resources available in the environment. This divergence in assumptions increased with age and exposure to the total life situation determined by socio-economic realities associated with the child's specific position in the stratification system.

105. Handler, June Moss. An Attempt to Change Kindergarten Children's Attitudes of Prejudice Toward the Negro. Columbia University, 1966. 255p.
Adviser: Professor Kenneth D. Wann. 67-2804.

This research was an attempt to study the ways by which attitudes of prejudice toward the Negro might be changed in kindergarten children. An attempt was also made to determine if certain materials could be developed that would be useful in helping kindergarten children examine prejudice in a way meaningful to their age level and individual needs. The researcher limited her work to the school room, recognizing however, that the home, community, and society play important roles in attitude formation. The study focused on the relationship of the white child to the Negro. Within the classroom children were encouraged to develop positive attitudes toward the Negro by allowing them direct and indirect opportunities to examine their relationships and attitudes toward them. It investigated the following in an attempt to help the child correct his faulty generalizations: (1) the way kindergarten children think in terms of sharp differences such as good-bad, black-white, hot-cold; (2) the association by learning of the Negro with social labels such as "dirty," "not nice," and "not nice looking"; and (3) the negative emotional content that the color designations "black" and "brown" assume when related to the Negro.

The researcher worked with the teachers in a suburban integrated kindergarten class. The study was conducted over a period of one term. There were a comparison group and operational group, both in the same community and both integrated. Experiences in the operational classroom followed the general kindergarten program. Certain materials were added when the teachers and researcher felt they were appropriate for the study. These centered around five areas: books, puppets, discussion, special art media, and Negro visitors. These special experiences were conducted on a regular basis. They were introduced by the teachers or the researcher. Observations were recorded by the researcher before, during and after the planned experiences, and during specific work periods. A second observer recorded in the classroom for a specified period to validate the observations of the researcher.

For purposes of further analysis, each child in both groups was tested separately in two pre-tests and two post-tests of approximately half hour duration. The full significance of the study could be evaluated only by taking into account the interrelationships between the pre-test, post-test, and intervening experiences. This included the results from the tests and all the records made by observers connected with the study.

Results of this study indicated that white children in the operational group began to verbally correct their faulty generalizations about the Negro. This also applied to the Negro children but to a lesser degree. Children in the comparison group, as a group did not evidence such positive change. There was also evidence that special materials and techniques helped the children in the operational group to examine their concepts of difference.

The researcher concluded that given special experiences conducive to looking at beliefs and feelings about the Negro, young white children could change their negative attitudes of prejudice.

106. Davidson, Morris. An Ecological Exploration of Educational Activities in a Nursery School. Wayne State University, 1968. 159p. Adviser: Jacob S. Kounin. 71-19,148.

Video-taped records were made of certain educational sessions which occur routinely in a sub-setting of a university nursery school and are taught by teachers-in-training. These are instructional activities designed for and carried out with small groups of children, following a brief rest-period. They take place in a small room which is set apart from the other play and educational activities of the nursery school. Forty-eight of these video-taped sessions were later studied intensively by the investigators, using television monitors. Associations were found to exist between types of activities and modes of behavior induced within activities, and between modes of behavior and children's levels of task involvement and deviant behavior during the activities.

The lessons were divided into three classifications: (1) "Listen-Look and Talk" lessons, in which children were mainly observers and required by the teacher to be only minimally participant; (2) "Concept-Builder" lessons, in which somewhat greater child-participation was required by the teacher, and in which the purpose of the lesson was concept-development; and (3) "Make and Do A-go-go" lessons, in which physical activity of some sort was requisite in the purpose and design of the lesson. The kinds or modes of behavior instigated during introductory periods of each lesson were coded for proportions of verbal or cognitive behaviors and for physical activity level.

Children's task-involvement was rated as either appropriate or inappropriate in relation to the lesson in progress. A count was made of deviant behaviors, defined as those behaviors which interfered with another child's appropriate task-involvement or with the teacher's presentation of the lesson.

The activity-type classifications were found to be significantly associated with the modes of behavior which were generated within each classification, but not with levels of appropriate involvement or deviant behaviors. Modes of behavior instigated in the different types of lesson activities, however, were found to be significantly associated with levels

of appropriate involvement and deviant behavior. Physically-passive, cognitively uninvolving lessons and highly active locomotor type lessons tended to be associated with low levels of appropriate involvement and high levels of deviancy. Moderate levels of physical activity, in combination with a demand for cognitive involvement by the child in the type and level of his activity, tended to be associated with very high levels of appropriate task-involvement and very low levels of deviant behavior.

Materials introduced by the teachers as adjuncts or props to learning activities were rated as to their conducive or coercive power toward appropriate or inappropriate behavior within the specific settings. It was found that higher ratings of props, as conducive to appropriate behaviors, were significantly associated with appropriate task-involvement and with low rates of deviant behavior.

Behavior-data differentiated by sex indicate that girls tended overall to be more appropriately task-involved than boys, and that boys tended to be more deviant, especially in those sessions which included higher levels of physical activity and less demand for cognitive involvement. The data also suggest that sharp imbalance in the proportion of boys and girls present in the setting may trigger inappropriate and deviant behaviors in the members of that sex group which is in the minority.

In general, the findings indicate that the creation of an optimally effective classroom ecology at the nursery-school level demands thoughtful structuring of the physical setting and selection of the objects within it. Careful pre-planning of educational activities is essential, with emphasis upon the maintenance of age-appropriate cognitive stimulation and age/sex-appropriate activity levels.

107. Weller, Mary Alice. An Analysis of the Effects of a Formal Pre-Kindergarten School Experience on the Adjustment of Children Enrolled in a Regular Kindergarten Program. The University of Iowa, 1968. 80p. Adviser: Professor Jerry N. Kuhn. 69-8823.

Because of the increased interest in the education of the young child it seemed judicious to determine if a pre-kindergarten experience is of value to children in their later adjustment to the kindergarten. If we are to ask for increased financial support from various governing bodies it would seem important to establish the effect of a pre-kindergarten experience on children--not only children from disadvantaged homes but children from average and above average homes.

The purpose of this study was to determine the effects of a pre-kindergarten experience on the behavior and performance of children enrolled in a regular kindergarten program. The study was designed to ascertain if children who had attended a nursery school or a four-year-old kindergarten had an initial advantage over children who had not, when entering kindergarten. If there was an advantage, did this advantage persist at the end of a year's attendance in regular kindergarten? The major determinants in establishing the effect of the pre-kindergarten experience were ratings by parents and teachers as to their view of children who have had or who have not had a pre-kindergarten experience and self-ratings by the children involved.

The study was conducted in the kindergarten of the University School of Northern Illinois University and kindergartens in the DeKalb Public

Schools. After initial testing on the primary form of the California Test of Mental Maturity in September, matched pairs of children were chosen based on MA and chronological age. There were twenty pairs of boys and eighteen pairs of girls--one member of each pair having had a pre-kindergarten experience and one member not having had such an experience. The children all came from upper-middle and middle class homes as determined on the Havighurst socio-economic ratio.

Along with the mental maturity test in September, each child was given the California Test of Personality, primary form. The parents and teachers of the children were asked to rate each child on a rating form devised by the writer. This rating form covered five major areas of adjustment to kindergarten--social, intellectual, emotional, interests, and skills. Descriptive terms were used for the five areas, later numerical values were assigned for the purpose of statistical analysis.

The possible scores on the rating scale ranged from a maximum of five to a minimum of one. The same tests and rating form were used in September and in May.

The t-test was used to compare the scores of the children and the parent and teacher ratings.

Conclusions

Children who have had a pre-kindergarten experience do not have an initial advantage over children who have not had such an experience upon entering regular kindergarten. Since there was no initial advantage it would follow that no advantage persisted at the end of a year's attendance in kindergarten. This proved to be the case.

Children who have had a pre-kindergarten experience do not view themselves differently than those who have not. This was concluded on the basis of results obtained on the personality test.

Kindergarten teachers, when rating the children in September and in May, tended to rate the children who had had a pre-kindergarten experience higher than those who had not but the expressed difference was very minimal and could be due to chance. Therefore, it was concluded that kindergarten teachers do not consider children who have attended a preschool more mature in the five areas rated.

Parents, when rating their children in both September and May, evidenced a slight tendency to rate those who had not attended a pre-kindergarten higher than those who had. Based on the analysis it was concluded that parents do not consider children who have had a pre-kindergarten experience more mature than those who have not had such an experience.

The results obtained from children, teachers and parents indicate that attendance in a four-year-old nursery or kindergarten classroom for the type of children dealt with in this study does not result in a significant difference on any of the measures utilized.

108. Donahue, Elayne Meyer. A Study of the Preference of Negro and White Kindergarten Children for Picture Book Stories Which Feature Negro and White Story-Characters. University of Colorado, 1969. 136p. Adviser: Associate Professor Virginia Westerberg. 70-5838.

The purpose of this study was to compare the responses of Negro and white kindergarten boys and Negro and white kindergarten girls to pic-

ture books stories which were read to them by the investigator. The nine intact classrooms used in this study were selected because they had an enrollment that was either predominantly Negro or white.

Four books were used in this study. The two books featuring Negro characters were drawn randomly from a book list of Negro literature suitable for kindergarten children. The two books which depicted white characters were selected by the investigator because they had themes similar to the Negro books.

Each of the selected books was reproduced in two experimental reproductions. In one, the race of the story characters was kept the same as in the original edition. In the other, the race of the story characters was changed to that of the opposite race. Therefore, differences between the two experimental reproductions of each book were the skin color of the characters and where necessary, an altered hair style. The sets of books were prepared and each set was read to approximately half of the Negro and half of the white students. The principal investigator read one story each day to each of the classes. There was no discussion about the story. Immediately following each story presentation, the investigator administered a pictorial questionnaire which was used to evaluate the students' liking of the story and its main character. On the fifth day each student was asked to rank the four books in order of preference. The individual interviews were conducted by the principal investigator or a person trained by the principal investigator.

A $2 \times 2 \times 2$ (sex by set by race) analysis of variance was used to analyze the data from the questionnaires and preference rankings. The results showed that there was no significant difference between the preferences of Negro and white kindergarten boys and Negro and white kindergarten girls for picture books which featured Negro and white story characters.

109. Flynn, Timothy Michael. Traits Related to Achievement Motivation in Migrant Preschool Children. The Florida State University, 1970. 106p. 71-18,359.

This study was designed to determine whether motor inhibition, self-control, relationship with achievement model, dependency, self-concept, delay of gratification, and risk taking constitute an achievement motivation construct for migrant preschool children.

The basis for the study was the construct of achievement motivation developed by McClelland and his associates (1953). The theory postulates that the achievement motive is a learned expectation that under certain conditions achievement oriented responses will be reinforced. The theory also describes individuals who possess achievement motivation in terms of certain traits conducive to achievement, including those listed above.

The sample used in this study consisted of 95 male and 100 female children between the ages of three years, nine months (3-9), and four years, nine months (4-9). These children were attending programs of compensatory pre-school education in two south Florida counties. The great majority of the children in the study were Negro, with only eight white children.

Two methods of measurement were used: (1) individual tests which were administered by psychometrists, and (2) teachers' and aides' observations recorded on the Pre-Kindergarten Scale. A convergent discriminant vali-

dation procedure was used to provide evidence of the validity of the four traits; (cognition, self-control, relationship with achievement model, and dependency) which were established from the Pre-Kindergarten Scale through factor analysis. According to this technique, convergent validity ranged from .53 to .28, while divergent validity ranged from .00 to .38.

Multiple linear regression analysis was used to examine the relationship between the seven motivational traits and the achievement measure, the Cooperative Preschool Inventory. Separate analyses were conducted for the boys and the girls, with the possibility of a curvilinear relationship tested for each trait.

The analysis of the data was based on the assumption of an additive relationship between motivation and cognition in predicting achievement. After removal of the achievement variance due to cognition, the remaining prediction of achievement over that accounted for by cognition was construed as support for the inclusion of that trait as a component of the achievement motivation construct. The additive nature of the relationship was examined in two models. The first model tested the first consequence of the research hypothesis, which stated that if the seven traits constitute the achievement motivation construct in migrant children each trait will independently predict the child's level of achievement when acting in the presence of cognition.

The results indicated that for the girls the traits self-concept and risk taking satisfied this criterion. For the boys, the traits self-concept, motor inhibition, self control, and delay of gratification accounted for a significant percentage of the variance.

The second consequence of the research hypothesis stated that if the research hypothesis is correct, then each trait, in the presence of the remaining six motivational traits and cognition, will independently predict achievement. The same traits that satisfied consequence one (for both the boys and the girls) also satisfied the criterion for consequence two of the research hypothesis.

The results of the study support the research procedure of performing separate analysis for each sex. This research indicates that many of the same traits that predict achievement for middle class males also predict achievement for migrant preschool males, and therefore provides support for use of McClelland's et al. (1953) construct of achievement motivation with a disadvantaged preschool male population.

110. Inwood, Barbara Hawkes. A Study of the Effect of the Supplementary Kindergarten Intervention Program on Subsequent Development of a Group of High Ability Disadvantaged Children. The University of Michigan, 1970. 152p. Adviser: Lowell W. Beach. 71-15,185.

The primary purpose of this study was to determine the effect of the Supplementary Kindergarten Intervention Program (Skip) on the subsequent achievement, classroom behavior, and self-concept of the subjects.

The Skip Program, an intervention program for high ability disadvantaged kindergarten children conducted during the school years 1967-68. 1968-69 in Ypsilanti, Michigan Public Schools, was generally successful in the attempt to stabilize or augment the gains made by the participants following a preschool experience. This study was designed to

determine the long range effects on the subjects now enrolled in the first and second grades.

The subjects identified on selective criteria as disadvantaged high ability were randomly assigned to either one of the two experimental treatment groups or to the control group. In addition to the regular public school kindergarten experience, the subjects in the two experimental groups received an additional half day experience based on Piaget's philosophy of intellectual development. Experimental Group I also included the home counseling component. The control group subjects attended only the public school kindergarten sessions in their own school neighborhood.

Sixty-five of the original 72 Skip subjects who were still in the Ypsilanti or neighboring school districts were involved in this study.

Achievement was measured by the Stanford Achievement Test, Primary Battery 1, Form W and X. Classroom behavior was measured by the Pupil Behavior Inventory. The Early Elementary Form of the Self-Concept and Motivation Inventory was used as the measure for self-concept.

The results of the study show that there were no significant differences between either of the experimental and the control groups in academic achievement, classroom behavior, and self concept at the end of the first and second grade in public school. All three groups began to show an achievement lag at the end of first grade which became more apparent at the end of the second grade. The teachers viewed the high ability disadvantaged subjects on behavior in the top half of the range from average to well behaved in the classroom. The total group also scored on the positive end of the self-concept scale of average to high.

Significant differences for sex, race, and sex-race interaction were found in various subsections of the instruments used in the testing of the hypotheses. However, these findings did not suggest any conclusive trends or generalizations.

The results of this study are consistent with many previous research findings that gains can be achieved by the subjects through preschool and kindergarten intervention programs, but, after first or second grade in public school without enrichment experiences the experimental groups are no longer distinguishable from the control group.

111. McAdoo, John Lewis. An Exploratory Study of Racial Attitude Change in Black Preschool Children Using Differential Treatments. The University of Michigan, 1970. 96p. Adviser: Percy Bates. 71-4678.

This study examined the effects of positive and negative reinforcement and a Black consciousness curriculum on the racial attitudes of Black preschool children. Sixty-five lower socio-economic Black preschool children ages 3.5 to 5.5 were selected to participate in this study. The subjects came from three different integrated nursery schools located in Ann Arbor, Dearborn Heights, and Ypsilanti, Michigan.

Each subject was given the racial attitude and sex role measure (Williams and Roberson, 1967), and the racial preference test (Asher and Allen, 1969) as pre-and posttests. The experimental groups received different treatments over a six-week period. The experiment was designed to last eight weeks from the beginning of pretesting to the posttesting.

The testing was done by two male and two female Black graduate students enrolled in the University of Michigan. An attempt was made to balance

the possible influence of race, sex, and experimenter bias of the testers. Two Black undergraduate students (one male and one female) administered the behavior modification materials to the PR and NR groups. Six Black female undergraduates were chosen as teacher aides for the BC group.

The hypotheses were:

Hypothesis One. There will be no significant difference in posttest racial attitude mean scores when adjustments are made for pretest mean racial attitude scores, in the three treatment groups.

Hypothesis Two. There will be no significant sex differences in the posttest mean racial attitude score when adjusted for differences in the pretest racial attitude score.

Hypothesis Three. There will be no significant effect of family status differences in the posttest mean racial attitude score when adjusted for differences in pretest mean racial attitude score.

Findings were that racial attitudes can be changed in both a positive and negative direction. The results supported Williams and Edwards (1967) in finding negative reinforcement to cause greater changes than positive reinforcement and Black consciousness curriculum. No sex differences were found. There was no difference in change scores for subjects coming from intact and those from nonintact homes.

The racial attitudes of the subjects in this study were found to be more positive towards their own ethnic identity than McAdoo's (1970) and Williams and Edwards (1969) studies. The subjects from this study chose to play with the brown doll more frequently on the racial preference test than either in the Clark and Clark (1939), or the Asher and Allen (1969) study. Thus, results may indicate a possible shift in the Black child's feelings for his own ethnic group.

112. Richards, Herbert Charles. Socialization Dimensions Among Five-Year-Old Slum Children. Emory University, 1970. 122p. 70-21,932.

Data were gathered over a 5 year period on more than 300 black and white five-year-olds attending EIP and Title I prekindergartens in poor, urban neighborhoods of Atlanta, Georgia. From these data a correlation matrix was generated and factor analyzed. 5 factors emerged and were replicated statistically: (a) verbal facility; (b) coping with anxiety by withdrawal; (c) coping with anxiety by aggression; (d) alienation; (e) biological sex. For both boys and girls, the variable clusters associated with (a) and (b) were negatively correlated. The variable clusters associated with (a) and (c) were correlated only for girls. The results were interpreted to mean that coping by withdrawal indicates personality maladjustment and interferes with verbal facility. Coping by aggression does not interfere with verbal facility. Because it is socially unacceptable for girls to cope by aggression, girls with high verbal facility choose other means of coping with their anxiety.

113. Rentfrow, Robert Keith. Concomitants of School Achievement in Disadvantaged Children. The University of Michigan, 1970. 89p. Adviser: Percy Bates. 70-21,767.

Massive preschool education programs for disadvantaged children have been in operation for almost a decade. Many research studies have re-

ported salutary effects as a result of preschool attendance in terms of accelerated intellectual and social development. Few studies have followed the pre-school attendants into the elementary school to observe whether the effects have permanence. This study reports on the follow-up of children from the Perry Preschool Project, which has maintained a longitudinal interest in the children.

This study investigated the present status of a group of disadvantaged black children, who had experienced a structured preschool experience, on measures of personality and cognitive functioning. These children are now in the 2nd, 4th and 6th grades. Two control groups, matched on age and sex, were likewise investigated with the same techniques. One group was matched with the preschool group at the time the former group entered preschool. The other group consisted of advantaged, white, middle-class children.

Previous longitudinal research on the Perry Preschool children indicated that the preschool participants maintained a superiority on school achievement measures after their initial superiority in intellectual functioning (IQ) had dissipated. This study investigated the question of what differences in personality, cognitive functioning and school attitudes might concur with this elevated school achievement performance. Hypotheses were generated which predicted more optimal personality functioning in children who had attended the Perry Preschool. The specific personality constructs selected for investigation were school anxiety, conceptual tempo (reflection-impulsivity), locus of control, school attitudes and future aspirations.

The results indicated that the children who attended preschool did function differently than the matched disadvantaged children on some of the measures. The preschool attendants were less anxious about school, preferred academic activities more, and showed a greater desire to go to college. Step-wise regression analysis indicated that locus of control was the strongest of the personality measures in predicting school achievement test performance across the groups. Comparison of the correlations across the groups on the personality and intellectual measures indicated that the preschool attendants looked more like the advantaged children than did the preschool control children. The results also indicate that the disadvantaged girl performs better on standard measures of intellectual development and school achievement than boys. This sex effect is most pronounced for the disadvantaged girls who attended preschool.

These findings provide minimal evidence for a generalized effect on the personality development of the disadvantaged child as a function of having attended a structured preschool. Preschool programs which promote cognitive-intellectual growth do not have an obvious effect on the disadvantaged child's personality development. Future studies must investigate further the complex interaction between cognitive and personality dimensions in the development of the disadvantaged child..

114. Venn, Jerry Rodger. The Vicarious Conditioning of Emotional Responses in Nursery School Children. University of Virginia, 1970. 61p. 71-6707.

Nursery school children were shown films in which a model manifested either fear responses or positive emotional responses to a neutral stimulus. The purpose of the films was

to vicariously condition either fear or positive emotional responses in the children. The measure of vicarious conditioning was the children's rate of response to the conditioned stimulus and a control stimulus in several operant situations in which the children were placed after watching the film.

In Experiments 1 and 2, fear responses were vicariously conditioned. After watching the fear film, the children showed a lower rate of operant response to the fear stimulus. However, this effect was relatively short-term and easily neutralized by instructional and reinforcement conditions. In Experiments 3 and 4, positive emotional responses were vicariously conditioned. After watching the positive film, the children showed a higher rate of operant response to the positive emotional stimulus. Again, however, the effect was short-term and easily neutralized.

The experiments show that human operant responses can be affected by both vicarious fear conditioning and vicarious positive emotional conditioning. However, the films and procedures used in the present studies had relatively brief and specific effects on the children's operant behavior.

115. Ogle, Robert Ray. The Impact of Three Preschool Intervention Programs Upon Selected Personality Variables. University of Illinois at Urbana-Champaign, 1971. 134p. 72-12;319.

Considerable concern has been expressed regarding effects of highly structured, academically oriented preschool intervention programs on children's personality development. The purpose of this study was to determine whether the type of preschool program in which children participated as four and five year-olds affected their scores on selected personality measures at the end of the second grade. The Ss consisted of 58 disadvantaged children from three different preschool intervention programs developed at the Institute for Research on Exceptional Children, at the University of Illinois. The three programs in which the Ss had participated in 1965-67 were: a traditional nursery school program ($N=25$); the Karnes Amerliorative Program ($N=24$), highly structured with a game format; and the Bereiter-Engelmann (B-E) Direct Verbal Program ($N=9$), highly structured with a tightly sequenced academic orientation. The personality measures administered at the end of the second grade in May, 1969 were: The Intellectual Achievement Responsibility Questionnaire (IAR); the Test Anxiety Scale for Children (TASC); and the Self-Esteem Inventory (SEI).

Thirty-eight Champaign-Urbana second grade pupils (referred to as Controls in this study) who had not participated in the intervention programs were also given in the personality measures. The nine B-E Ss were matched with nine from the Karnes, nine from the Traditional and nine Controls on sex, IQ and race.

Results indicated no significant differences existed among the four matched groups on the IAR questionnaire, a measure of internal vs external control of reinforcement. Analysis of data on total groups, however, revealed significantly higher scores for the Control Ss, indicating they acknowledged more responsibility for their academic successes than children from the intervention groups.

No significant differences were found on the TASC among the four matched or total groups. The general, though not significant, tendency of the B-E Ss to have lower anxiety score suggests that two years of training in a tightly sequenced and academically oriented preschool program did not result in having these children report high anxiety as second graders.

Significant differences were not found for either the matched or total groups on the Self-Esteem Inventory. The tendency, though, again not significant, was for the B-E Ss to report themselves as having high esteem.

Since no statistically significant differences were found, no claim can be made that the type of program in which the Ss participated affected their performance on the personality measures used in this study. Proponents of any one of the three types of intervention programs included in this study will have to wait for more definitive results to find support for their positions.

116. Walker, Patricia Ann. The Effects of Hearing Selected Children's Stories That Portray Blacks in a Favorable Manner on the Racial Attitudes of Groups of Black and White Kindergarten Children. University of Kentucky, 1971. 110p. 72-9425.

The purpose of this study was to determine whether negative attitudes of black and white kindergarten children toward blacks could be modified by hearing selected children's stories that portray blacks in a favorable manner. A secondary purpose was to examine the responses of the subjects to the racial attitude stories of the measuring instrument to determine: a) if either group of subjects gave evidence of an anti-black bias, and b) if there were any differences between the two groups of subjects in their responses to the racial attitude stories.

There were 4 uniracial groups of kindergarten subjects used in the study. Forty-five of the subjects were black and 40 were white. The children were enrolled in kindergartens in 3 communities within the Commonwealth of Kentucky during the 1970-71 academic year.

The Preschool Racial Attitude Measure was administered individually to each of the subjects prior to the experimental procedure. Pretesting of the subjects began October 26 and ended October 28. The experimental phase of the study began November 2 and lasted through December 11, a total of 6 weeks. One black kindergarten group and 1 white kindergarten group were selected as experimental groups. A black kindergarten group and a white kindergarten group served as control groups.

From several published bibliographies, 35 children's stories that portrayed blacks in a favorable manner were selected to be read to the experimental groups. Each day for 6 weeks during the story period, the teachers of the 2 experimental groups read 1 or 2 stories. The control group children also heard stories during their daily story period. However, the stories read by the classroom teachers of the 2-control groups were either animal stories or informational kinds of books. At the end of the experiment each subject was individually administered the PRAM to obtain a posttest measure of racial attitude.

Chi-square statistical treatment of the data determined that: (1) Black kindergarten subjects responded to the racial attitude stories of the measuring instrument by selecting pictures of white figures with posi-

tive evaluative adjectives and pictures of black figures with negative evaluative adjectives. The frequency and proportion of the responses of the black kindergarten subjects indicated a positive orientation toward the white ethnic group and a negative evaluation of their own racial group.

2) White kindergarten subjects responded to the racial attitude stories of the measuring instrument by selecting pictures of white figures with positive evaluative adjectives and pictures of black figures with negative evaluative adjectives. The frequency and proportion of the responses of these white children indicated a strong positive response toward their own group and a negative evaluation of the black ethnic group.

3) White kindergarten subjects were significantly more white group oriented and biased toward blacks than were the black kindergarten subjects.

An analysis of covariance statistical treatment was used to determine if there were any differences among the adjusted group means at the conclusion of the 6 week story-reading experiment. The .05 level of confidence was accepted as the level of significance. The F test of adjusted group means led to the conclusion that hearing stories that portray blacks in a favorable manner is not by itself a method that is sufficient to modify the negative racial attitudes of black and white kindergarten subjects toward blacks.

Parent Involvement

117. Ambrose, Paul Boyd. A Study of Selected Pre-Kindergarten Programs for Culturally Disadvantaged Children. Michigan State University, 1966. 282p. 66-14,101.

The purpose of this study was to develop a set of guidelines and priorities for the establishment and improvement of compensatory pre-school programs in the public school. It attempts to provide guides to the development of a sound statement of philosophy and purpose, the instructional program, staff needs, the home-school relationship, and the organizational needs of the program.

To accomplish the stated purpose of the study, a thorough review of the literature was conducted to extract the philosophy and principles behind the pre-school experience for culturally deprived children, and to identify the problems which necessitated this intervention. From the review of the literature an interview guide was prepared and fourteen selected pioneer programs were visited to determine what was being done in these programs and the rationale behind these practices. It was also determined what the interviewees considered to be optimum.

From the results of the review of the literature and the interviews, a list of eighty statements were drawn up and submitted to a panel of experts in the field of compensatory education and cultural deprivation. The panel of experts consisted of people who are involved in the development of theory in this field and people who are involved in the actual administration and supervision of the pre-school programs.

The major findings in the study can be summed up as follows:

Philosophy:

1. There is near unanimous agreement that "The probability of the full development of the culturally deprived child's potential is greatly reduced without some form of early intervention." The maximum development of the child's potential is the aim and purpose of the public schools, therefore some form of early intervention is indicated in the public schools.

2. The philosophy for the public pre-school program for culturally disadvantaged children is well defined and well agreed upon. While the complete statement of philosophy cannot be presented here, it is based on the concept that education of the child is the joint responsibility of the home, the school and the community. Education is the result of the experiences which the child is provided by these agencies, and the failure of one of these agencies to fulfill its responsibility indicates that the others must assume a greater share of the responsibility. This would mean the provision of a pre-school enrichment program for the culturally disadvantaged child.

Purposes:

The purposes of the pre-school enrichment program fall into two categories, the development of skills and facilities for learning and social adjustment, and the development of attitudes which will be conducive to learning task and the social adjustment of the child. Among the skills and facilities which should be developed by the pre-school program are, (1) an efficient cognitive structure, (2) an improved language function, (3) improved perceptual skills, (4) and an enriched

and meaningful experiential background. Among the attitudes to be developed in the child are (1) a positive attitude about himself, (2) a positive attitude about the school and learning, (3) a positive attitude about his family and environment.

Instructional program:

The basic goals of the instructional program are (1) to develop a positive self concept, (2) to develop the language ability, (3) to develop perceptual discrimination, (4) to develop learning concepts, (5) to develop a broadened breadth and meaning of experiential background, (6) to develop a positive identification with the school, and (7) to develop values which are congruent with the expectations of the school. These goals should be achieved through the provision of opportunities for the child to have experiences which will promote and develop these functions. The emphasis must be on the child's having experiences, rather than on a form of instruction.

Instructional Staff:

The program should provide for a well trained and understanding staff. It should have at least two teachers for a group of fifteen or less children, and at least one of these teachers should be fully certified or certifiable, preferably in early childhood or primary education. The staffing should also provide for services of auxiliary personnel such as nurses, dental technicians, social workers, and diagnosticians.

Home-School Relations:

There should be established a planned program for developing the home-school relationships. This program should be based on meeting the needs of the parents, and helping the parents to meet the needs of the children. There should be provisions in the program for released time for the staff to carry out this function.

Organization:

The organizational plan should provide for a method of selection of the children based on the needs of the children, and the ability of the program to meet these needs. The program should be in session for at least four half days per week for a single group of children. It should preferably be in session for the entire school year for one group of children.

In addition to these findings, the implications of the findings and recommendations for further research were presented. The major implication of the study, outside of the illustration of the need for such a program in the public schools, was that a close look at the programs provided for the children in elementary school needs to be taken, and the school must assume the leadership in strengthening the home-school relationship in the culturally deprived communities, to aid them to assume their share of the responsibility for the education of the children.

118. Daugherty, Marilyn Walker. An Investigation of the Relationship Between Maternal Expectations and Classroom Behavior of Preschool Children. Wayne State University, 1968. 121p. Adviser: Juanita Collier. 71-19,147.

The problem was to investigate the relationship between maternal attitudes reflected by the dimensions of "pushing" (activity-inducing) and

"letting go" (independence-granting) as measured by Irving Torgoff's Parental Developmental Timetable and childrens' classroom behavior as measured by the Levine-Elzey Preschool Social Competency Scale.

Major Hypothesis:

Significant relationships will be found between maternal expectancies in the dimensions of "pushing" and "letting go" and the various levels of social competency of children at the preschool level.

Minor Hypotheses:

A significant relationship will be found between high social competency of children and their mothers' responses indicating a pattern of late "pushing" and early "letting go."

The experimental group included 91 children (45 boys and 46 girls) ranging in chronological age from three to five years. Their mothers comprised the parent sample. All subjects are considered to be "culturally disadvantaged" and were enrolled in the Detroit Preschool Child and Parent Education Project. Most of the research population was Negro. Social competency scores for children were derived from teacher responses to the Levine-Elzey Preschool Social Competency Scale. Mothers' expectations for "pushing" and for "letting go" of children were derived by eliciting responses to items included on the Parental Developmental Timetable. Expectations for boys and for girls were elicited.

The Draw-A-Person and Peabody Picture Vocabulary Inventory were administered to the children in order to examine the influence of intelligence on the major variables under consideration.

In order to investigate the validity of the major hypothesis, the two maternal expectancy dimensions for both boys and girls were correlated with the social competency, chronological ages, and mental ages of the children in a correlation matrix design. The sex variable was examined through additional correlational matrices for separate sub-samples of boys and girls. In addition, t tests for differences between means were computed to reflect possible significant differences between boys and girls in regard to chronological age, mental age, social competency, and the expectations which their mothers hold for them which pertain to "pushing" them or "letting go" of them.

In order to investigate the validity of the minor hypotheses, the social competency scores were treated in a two-way analysis of variance design wherein mean scores were derived for the four possible "pushing-letting go" patterns in regard to earliness and lateness. The differences between these mean scores were then subjected to the Neuman-Keuls test for significance.

The major hypothesis of the study was supported, the minor hypotheses were not substantiated. Specifically, the findings indicate:

(1) a significant relationship between the social competency of girls and their mothers' expectation for "pushing", (A relationship between social competency of girls and their mothers' expectation for "letting go" which approached significance.)

(2) A significant relation ip between the mental ages of girls and their mothers' expectation ror "pushing,"

(3) A significant relationship between the mental ages of girls and their mothers' expectations for "letting go,"

(4) A significant relationship between the chronological ages of girls and their social competency.

(5) No significant relationships between the dimensions given above (specified for boys instead of girls) for the subsample of boys.

(6) In the total sample (boys and girls combined), social competency significantly related to both "pushing" and "letting go,"

(7) In the total sample, social competency significantly related to chronological age, and

(8) In the total sample, mental age (DAP scores) significantly related to maternal expectations for "letting go,"

(9) No sex differences in chronological age, mental age, social competency, or expectations from mothers.

119. Dover, Bennie James. A Follow-Up Study of Preschool and Non-Preschool Pupils in Five High Priority Schools. University of Maryland, 1970.
150p. Adviser: Dr. Leo W. O'Neill, Jr. 71-4045.

The purpose of this study was to make a descriptive comparison of two groups of pupils who attended or did not attend a Title I preschool readiness program in 1966. The main concern was to find out who these pupils were in terms of various demographic and personal factors as well as to compare their school performance from the time they entered school, as first-graders, through the first semester of their third year of schooling.

A comprehensive review of the literature was conducted by the writer in search of studies with particular relevance to the present study. The findings from the literature reviewed helped to form the rationale for this study.

The subjects in this study were 279 Negro pupils of a South Carolina school district. The data on these subjects came from school records and from questionnaires completed by subjects' teachers. The data were divided into two categories. One category included items of information such as the pupil's sex, chronological age, occupation of parents, educational background of parents, number and position of older siblings in the family, and annual family income. The other category included such items of information as reading readiness and reading achievement test scores, intelligence test scores, record of school attendance, record of compensatory reading participation, and record of promotions and retentions.

Percentage, mean, and standard deviation were the statistical measures used in the calculation and treatment of the raw data. Special formulas were used to determine "large differences" between groups of subjects.

The following findings indicate some areas or factors which may be examined in other populations which had the opportunity to participate in a similar Title I preschool program:

1. The first-grade beginners in this study were not essentially different in regard to residential location, sex, and chronological age.
2. The first-grade beginners in this study evidenced important differences in regard to their family backgrounds which seemed related

- to their school success. The evidence points to the conclusion that parents of a higher economic and occupational level will demonstrate more interest in the education of their children than parents at a lower economic, and occupational level.
3. The evidence in this study tended to indicate a positive relationship between preschool attendance and reading readiness for boys but failed to show a relationship to reading readiness for girls.
 4. The evidence derived from scores on reading tests administered at the end of the first year of schooling showed no differences between the preschool and non-preschool subjects.
At the end of the second year the reading test scores for the two groups were similar, but a larger percentage of preschoolers were administered the higher-level reading test. Thus, the performance of the two groups was different at the end of the second year of schooling, the preschool group showing a higher performance level.
 5. The evidence tended to indicate that children who attend preschool are more likely to be promoted and receive higher grades, in the third year of schooling when subjective measures are used, than children who do not attend.
 6. The evidence presented in this study points to the conclusion that preschool may tell more about parents than it helps children themselves. Preschool, as described in this study, seems more useful as a predictor than as an educational facilitator.
 7. The evidence indicated that children who need extra-educational help most are the ones not being reached. Their parents seem to be the main cause of this neglect.
120. Freshour, Frank W. The Effects of a Parent Education Program on Reading Readiness and Achievement of Disadvantaged First Grade Negro Children. The University of Florida, 1970. 77p. Advisers: Maurice R. Ahrens and Ruthellen Crews. 71-16,783.

The purpose of the study was to determine whether a parent education program stressing parent-child interaction could improve the reading readiness and achievement of disadvantaged first grade Negro children. The sample was drawn from two schools which were classified as disadvantaged by ESEA. It consisted of a total of twenty-eight children. The experimental and control groups were matched by sex, teacher, and readiness scores on the Metropolitan Readiness Test which was administered in September by the classroom teacher. It served as the pretest. The same form was administered at the end of March and served as the posttest. The Metropolitan Achievement Test Primary I (Reading) was also administered in March.

The parent education program consisted of a series of fifteen meetings which began in October and ended in March. These sessions were held one night a week at each school for approximately half an hour with the exception of vacations. The main intent of the program was to improve readiness. Emphasis was focused on language development, visual perception, and auditory discrimination. The sessions also dealt with self-concept, individual differences, the classroom goals and activities of teachers, and the value of a variety of experiences. The basic format of the lessons was a review of the parent-child activities of the past

week, a new topic, and assigned parent-child activities for the coming week. Parents were asked to spend a minimum of ten minutes a day with their children. They were also asked to take notes at the meetings and keep a record of their activities with their children during the week.

Statistical treatment involved Lindquist Type I and Type III Analysis of Variance, a t test, and Kuder-Richardson Formula 21 for reliabilities.

The pretest posttest gain on the readiness tests was significant. On the readiness posttest there was an apparent raw score mean difference of 5.231 in favor of the experimental group. However, this difference did not reach significance, and it was necessary to retain the null hypothesis. The experimental group did not make a significant gain in readiness over the control group.

On the achievement test there was no significant difference in Word Knowledge, in Word Discrimination, and in Reading, and it was necessary to retain the null hypothesis. The experimental group did not score significantly higher in reading achievement. It should be noted that the scores on the reading achievement test were also judged to be unreliable on the basis of Kuder-Richardson Formula 21. It is probable that the achievement test was too difficult.

Primarily because of the small number of participants, it would be unwise to carry any findings beyond this particular study. The findings reveal an apparent, but not significant, difference in growth in readiness in favor of the experimental group. It also appears that readiness training is appropriate for those who score low in readiness initially but not for those who score high in readiness initially. This suggestion would call for teachers to be more discriminating in their use of readiness training.

Several suggestions are offered for further research. Teachers might become involved in a parent education program and work directly with the parents and children. Another possibility would be for a study to provide help to the parents and children, and evaluation of self-concept of both parents and children could also be explored. Teaching a child to read in his own dialect before transferring to standard English also appears promising for future research.

121. Smith, Mark H. The Role of Preschool Education in Alleviating the Problems of the Culturally Disadvantaged Urban Black Child. The Ohio State University, 1970. 209p. Adviser: Arthur E. Wohlers. 71-7570.

The purpose of this study is to present a proposal of preschool experiences for the inner city child. The purpose of these experiences is to facilitate his survival and eventual success in the elementary school. The proposed program is based upon certain criteria which facilitate its use as a guide for program implementation in urban centers throughout the nation. These same criteria are used as an evaluation tool to determine program success.

The review of the literature is divided into three parts, two of which deal with the history of the Black in America and the Black in today's society. The purpose is educational, reminding all who read it that Black people in America are the creation of a racist White society. Educators responsible for program implementation must understand that Blacks behave as they do not by choice, but as a manifestation of centuries of deprivation and suppression.

The initial step taken in the development of the program is the establishment of a frame of reference. This framework consists of a set of criteria which serve as a guide to program development.

The basic program consists of five parts, all closely related: (1) The School and Its Community. Program effectiveness is limited when dealing with the child in isolation. The role of the school and staff in relation to the total community is described. (2) The Projected Organizational Structure. This part of the program describes the Schome, an institution created to realistically deal with the common concerns of the preschool child, his family and the community. (3) Personnel Requirements, Characteristics and Roles. A description of the personnel needed and their roles is presented. (4) The Nature Of Student Experiences. The program of experiences specifically designed for the preschool age child is presented. The curriculum is academically oriented. (5) The Role of Parents. Part five deals with the value of parental involvement and presents a variety of ways parents can be involved and the types of experiences vital to parental growth and development.

To test the value of the proposed program, the writer enlisted the assistance of five educators closely involved with preschool education and the solution of problems of the disadvantaged. The panel reacted to a scale developed by the writer to determine the merits of the program. The writer also sought suggestions for program refinement.

A compilation of the panel reactions revealed overall acceptance of the program were: (1) That the position of family life consultant is vital to program success; (2) That a comprehensive parent program is essential and possible to implement; (3) That the community school education concept should be used as a foundation for total program development. (4) That the Schome serves well as the center for community education and services; (5) That the Schome serves well as the coordinating vehicle through which participating social agencies can improve their services to the community.

Recommendations for further study were: (1) How to determine the effectiveness of the academically oriented curriculum in terms of short and long range gains made compared to other approaches; (2) How to develop a better working relationship between school personnel and other social agencies; (3) How to develop an increased awareness of ghetto problems by educators; (4) How to study the effectiveness of the Schome concept; (5) How to determine the effects of a planned in-service education program on pupil achievement for teacher aides; (6) How to study the effects of the parent education program on the younger siblings of the children in the program.

122. Wright, Elsie Louise. A Correlational Study of Selected Sociological Variables and Two Ranges of Stanford-Binet Intelligence Quotients Among Culturally Disadvantaged Preschool Children. University of Alabama, 1970. 140p. 71-9155.

This study was designed to determine the correlations between highest quartile (IQs ranging from 96 to 137) and lowest quartile (IQs ranging from 44 to 78) Stanford-Binet Intelligence Scale (pretest) IQ scores and the following sociological variables:

1. Father's educational level
2. Mother's educational level
3. Number of hours of television watched per week
4. Father's occupational level
5. Mother's occupational level
6. Student's residence.

These data were collected from personal information sheets completed for 513 four- and five-year old culturally disadvantaged preschool children who were enrolled in the Huntsville-Madison County Education Improvement Program in the 1967-1968 and 1969-1970 academic years. Additionally, three variables: (a) age, (b) sex, and (c) race, were combined with the two IQ groupings (Group I--highest quartile IQs and Group II--lowest quartile IQs) to act as moderator variables in seven of the eight hypotheses.

Three statistical techniques were employed to test the hypotheses. The Pearson product-moment correlation was used to test the parts of each hypothesis comparing IQ and its various combinations with moderator variables to (a) father's educational level, (b) mother's educational level, and (c) the number of hours of television watched per week. The eta correlation ratio was employed to test hypothesis elements comparing IQ and its moderator combinations to (a) father's occupational level and (b) mother's occupational level. The comparison of student's residence with IQ and its combinations with age, sex, and race, was made using the point biserial correlation technique.

Parts of each of the hypotheses were supported. Based on an analysis of the results, the following conclusions were reached:

1. The father's educational level with the population in this investigation was related to the Stanford-Binet IQ scores at a statistically significant level only in the case of highest quartile IQ EIP participants who were black, male, and five-years old.

2. Group I white, male, five-year old EIP participants' Stanford-Binet IQ scores and the number of hours of television they watched per week were inversely related at a statistically significant level; while Group II students' IQ scores were not significantly correlated with hours of television watched, they were consistently positively related.

3. No clear pattern of relationship could be determined in regard to Stanford-Binet IQ scores and the various combinations of moderator variables, with IQ and the mother's occupational level even though a number of significant correlation coefficients were obtained.

4. The various combinations: (a) IQ groupings and mother's educational level, (b) IQ groupings and father's occupational level, and (c) IQ groupings and student's residence failed to reveal any clear-cut pattern in this study and few significant coefficients were obtained for these variables.

5. The moderator variables, age, sex, and race were effective in helping to obtain greater degrees of relationship, particularly between IQ and the father's educational level and hours of television watched per week.

Recommendations included: (a) continued correlational studies using the remaining sociological and demographic variables available through EIP data, and (b) experimental studies using the significant findings of this study so that possible cause-effect relationships might be determined which would aid in educational endeavors among culturally dis-

advantaged preschool populations.

123. Baker, Wanda Harris. Effects of Preschool Enrollment and Parent Participation on Academic Growth. University of Southern California, 1971. 98p. Adviser: Professor McIntyre. 72-537.

Education, in the process of redefining the parameters of the learning environment, is presently involved with remedying the problems of the socially disadvantaged. The socially disadvantaged child is one who is handicapped in the process of entering and participating in an urban, technological, and democratic society.

The disadvantaged child enters school with an educational deficit which continuously hampers not only his school progress, but his actualized potential. In order to halt the widening schism in our society between the advantaged and the disadvantaged, we must provide equal opportunity for educational advancement by counteracting deficits early. Counteracting deficits and concentrating on approaches that will allow competencies of the disadvantaged to be actualized is essential.

There is increasing evidence that the quality of environmental stimulation in the earliest months and years has a major influence on ultimate intellectual functioning. Adequate assessment of academic growth as a result of any intervening compensatory program is necessary.

This study assessed the effectiveness of planned preschool experiences by examining achievement of preschool disadvantaged children enrolled and not enrolled in preschool classes. It included measured changes in academic growth of preschool children enrolled in twelve Los Angeles City Unified School District prekindergarten classes, and prekindergarten children on waiting lists in five schools. Measurement in areas regarded as necessary for school success was obtained by pre- and posttest administrations of the Bettye M. Caldwell Preschool Inventory. The effect of preschool enrollment and amount of parent participation on subtest and total test inventory scores was measured.

It was expected that the children who were enrolled in preschool classes would show greater gains in achievement than those not enrolled. It was also expected that the experimental classes reporting more parent participation would show greater gains than those classes reporting less. These expectancies were realized. Children enrolled in preschool showed a significantly greater gain in the total Inventory used and in all subtests over those children not enrolled. Classes reporting more parent participation time showed a significantly higher gain than those classes reporting less time.

The findings support the need for continued preschool intervention and substantiate the influence of parent participation in the learning environment. Results showed that the amount of parental involvement is related to learner change to a high degree. The implications of early intervention in the form of preschool enrollment are that these programs, if well conceived and executed, can make relatively lasting changes. Concentrating on conditions that will counteract educational deficits and aid the disadvantaged child to obtain the necessary skills for self actualization is essential. The investigation of factors involved in the educational process is a step toward relevancy, reality, and creative growth.

124. Six, Leslie W., and Vugrin, John F. The Relationship Between Participation in Unruh Preschool Compensatory Education Program and Subsequent Educational Development. Both authors received degrees at United States International University, 1971. 254p. Adviser: Warren R. Baller. 71-19,097.

The purpose of this study was to determine the relationship between participation in the Unruh Preschool Compensatory Education Program in Chula Vista and subsequent educational development in preschool, kindergarten, first, and second grade. Specifically, the study measured relationship between participation in the Unruh Preschool Program in Chula Vista and the following factors: (1) Kindergarten readiness, (2) Reading readiness at the beginning of the first grade, (3) Reading achievement at the end of the first grade, (4) Reading achievement at the end of the second grade, (5) Social skills and attitudes that contribute to success in school and (6) Parent attitudes toward school.

PROCEDURE: Data concerning school readiness, reading achievement, self-concept, school-related social skills and attitudes were gathered using standardized tests and an observation technique. The data were utilized to compare preschool participants with children who were eligible preschool participants but who did not participate, and a sampling of nonparticipating children from the normal school population. In addition, data concerning parental school-related attitudes were obtained from a structured interview. Attitudes of actively involved parents were compared to nonactive parents. Achievement of children of involved and noninvolved parents was also compared.

The primary statistical treatment used to determine the significance of difference between means of the experimental and comparison groups was the t Test. Hypotheses in this study were rejected if the tests of significance of difference did not reach the .05 level.

The findings of this study indicate that participation in the Chula Vista Preschool Program for disadvantaged children warrant the following conclusions:

1. Participation has a positive overall influence on school readiness and reading achievement.
2. The trend of positive gains made in academic achievement of preschool participants persists in the second grade.
3. The greatest gains in achievement as a result of participation in the preschool program were made by the non-Spanish surnamed children.
4. In terms of academic achievement, the program helped but did not compensate children with Spanish surnames to the degree of non-Spanish surnamed children.
5. Two year preschool participation when compared with one year participation benefits children with Spanish surnames more than children with non-Spanish surnames.
6. Evidence from this study was not conclusive that preschool participation has an effect on the self-concept of the participants. However, evidence does substantiate the conclusion that the self-concept of the participants is equal to that of the comparison groups.

7. The evidence presented in this study shows that the objective of having participants share traits related to school behavior with their more middle class counterparts was not achieved.
8. In this study, active participation on the part of parents was not a factor affecting the achievement of preschool participants.
9. Actively participating parents did express a more positive attitude toward school than parents who did not participate.
10. Children from an environment similar to the preschool participants but who did not have the experience of preschool continue to show lower achievement than either the participants or the sampling from the normal population.

The findings of this study support the intent of compensatory preschool education programs. That is, they show that the program compensates for the social, economic, environmental, educational, cultural or family circumstances which place children in the position of entering school without the motivation and readiness required for successful performance in the public schools. The Chula Vista program has been successful and should be continued and expanded. The evidence presented in this study along with other evidence that is accumulating regarding the worth of preschool programs suggests that they are fast leaving the realm of experimentation and should, therefore, be expanded to meet the needs of all eligible three and four-year-old children.

Creativity

125. Savoca, Anthony Francis. The Effects of Reward, Race, IQ, and Socio-economic Status on Creative Production of Preschool Children. Louisiana State University, 1965. 55p. Adviser: Joel R. Butler. 65-11,405.

The purpose of this study was to investigate the role of reward, race, socioeconomic level, and Stanford Binet IQ scores as factors in the creative thinking capacity of very young children.

Sixteen groups of 4 year old children were given four tasks designed to elicit responses that could be scored for four of the divergent thinking factors that have been isolated by Guilford through factor analysis. Two divisions of race (Negro and white), two levels of socioeconomic index (0 to 3, and 5 to 7), two levels of IQ scores (86 to 105, and 111 to 136), and reward or nonreward, defined the axes of a $2 \times 2 \times 2 \times 2$ factorial design. The responses of the first 8 groups, 40 Ss, were used as norms for determining the degree of originality, or uncommonness of response for the second 8 groups, 40 Ss, which received a small toy as reinforcement whenever a response, other than a common one, was given. Weights determined from the total sample were then used for originality and figural flexibility scores. Measures of semantic flexibility and fluency were determined by the number of different response categories and the number of different responses, respectively.

The results show that reward and socioeconomic index are important factors for total divergent thinking, as measured in this study. The rewarded groups scored significantly higher ($p < .001$) than the nonrewarded groups, and the high socioeconomic index groups scored significantly higher ($p < .001$) than the low socioeconomic groups. The race x IQ interaction was also significant ($p < .05$) for the total of the divergent thinking measures. In this instance low IQ, white children scored higher than the high IQ, white children, while the reverse was the case for Negro children.

On the bases of the data presented the following conclusions appear to be tenable:

1. Three of the criteria used in the study (originality, semantic flexibility, and fluency) appear to reflect the same aspect of cognitive functioning, divergent thinking.
2. Differences in divergent thinking capacities are discernible in preschool children.
3. Differentiation of the convergent (as measured by the Stanford-Binet) and divergent thinking capacities is apparent very early in childhood.
4. Immediate material reinforcement has an overall enhancing effect on the divergent thinking of very young children.
5. Training for divergent thinking, as conducted in this study, does not improve one divergent thinking factor at the expense of another.
6. Cultural deprivation, in terms of the environmental conditions resulting from the parental education and occupation, has a negative effect on the divergent thinking of preschool children.
7. Negro children who obtain low IQ scores (and particularly those of low socioeconomic status) are likely to obtain lower divergent thinking scores, as obtained under the condition of this study, than other group combinations based on race, socioeconomic index, and IQ scores.

126. Aliotti, Nicholas Casper. The Effects of Warm-Up Activities on the Verbal Creative Thinking Abilities of Disadvantaged First Grade Children. University of Georgia, 1969. 182p. Adviser: E. Paul Torrance. 70-10,151.

A posttest-only control group research design was employed to investigate the effects of psychological warm-up activities on the verbal creative thinking abilities of young children. Ninety-six black first grade children in two schools were assigned randomly to one of three experimental treatments.

On the first morning of the experiment the Control group was individually administered the Torrance Tests of Creative Thinking, Verbal Form B, in accordance with directions in the examiner's manual. Concurrently, the Experimental One and Experimental Two groups participated in two parallel 40-minute physical, non-verbal warm-up sessions which stressed creative dramatics, playing make-believe,

and interactive dance. To control for the interpersonal interaction between each group and the respective leaders, each activity leader switched groups some 25 minutes into the activity. On the second morning of the experiment, the Experimental Two group participated in an additional language arts warm-up activity consisting of verbal expression and original associations to concrete stimuli. The Experimental One group was tested at this time. Finally, on the third morning, the Experimental Two group was tested.

It was hypothesized that activities intended to "warm-up" disadvantaged first graders would result in their making significantly higher scores on a verbal form of the Torrance Tests of Creative Thinking than a group of their peers who received a standard test administration.

The data were scored for fluency, the number of relevant ideas produced; flexibility, the number of shifts in thinking, categories, or responses; and originality, the statistical infrequency and creative strength of these responses.

A multivariate analysis of variance (MANOVA) technique was applied to the data to test the experimental hypotheses. Results of the analysis revealed no significant differences among the group means for the Control, Experimental One, and Experimental Two groups for the summed fluency, flexibility, and originality scores. Additionally, no significant sex differences of treatment X sex interaction obtained for these scores. With the single exception of a significant interaction effect for the flexibility score on the Guess Consequences Activity ($F=4.00$), no statistically significant findings resulted.

The overall findings, however, were not clear-cut. For example, replication of the experiment in the second school resulted in substantial increases in test performance for the two experimental groups. The differences, however, were not statistically significant and were attributed to the small sample size and the extreme within groups variability.

127. Lichtman, Marilyn Vickman. Intelligence, Creativity, and Language: An Examination of the Interrelationships of Three Variables Among Preschool, Disadvantaged Negro Children. The George Washington University, 1969. 301p. 70-13,956.

The purpose of this study was to investigate the interrelationships among the three variables of intelligence, creativity, and language in a preschool, disadvantaged Negro sample. A number of hypotheses were tested. The two major hypotheses were the following: (1) the interrelationships among the three variables are lower than the intrarelationships within each variable, and (2) a factor analysis indicates a factor structure suggesting that the variables measured different aspects of human behavior.

Six instruments were selected to measure the three variables: the Wechsler Preschool and Primary Scale of Intelligence (a verbal and performance measure of intelligence); the Torrance Test of Creative Thinking, Figural Form (a drawing test of creativity); the Mother Goose Test (a verbal measure of creativity); Items of Space and Location, Pictorial Form (a pictorial measure of language usage); Items of Space and Location, Object Form (a manipulative measure of language usage employing concrete objects); and the Language Facility Test (a verbal-pictorial measure of language facility).

A random sample of 104 four-year-old Negro children was selected from prekindergarten classes located in Washington, D.C., and situated in Title I areas or serviced by Title I funds. Title I funds are allocated primarily to areas considered disadvantaged. Each child was administered the six instruments individually in two sessions by a trained examiner. Data were tabulated and analyzed employing a number of statistical procedures. Results confirmed both major hypotheses regarding the relationship of the variables and the character of the factor structure. Other hypotheses tested in this study were also upheld.

Implications for further study were the following:

1. Additional research replicating the study with other groups, especially disadvantaged whites and middle class Negroes.
2. Additional research involving the nature and measurement of creativity among a disadvantaged preschool group: Development of new instruments for the measurement of creativity.
3. Additional research related to the type of format of a particular instrument in the measurement of behavior among disadvantaged children.
4. Additional research related to the interactions of age and sex on selected variables.
5. Continuous evaluations and revisions of aims and goals of Head Start and similar programs.

128. Weisbender, Leo Frederic. A Four-Year Follow-Up of Educationally Disadvantaged Preschool Children, Analyzing Home Environment Variables Facilitating Achievement. University of Southern California, 1969.
232p. Adviser: Metfessel. 69-16,568.

The influence of early experience in children's cognitive development is crucial. While heredity and environment are acknowledged as interdependent factors, evidence is accumulating that differences in test behaviors may be attributable largely to environmental differences rather than to inherent individual differences. Children from low socioeconomic areas usually begin kindergarten with more learning disadvantages than do their advantaged peers. The Los Angeles City School Districts piloted a preschool program in two Watts schools in 1964 based on the concept of compensatory intervention environment. Posttest scores at the end of preschool favored experimentals over their control counterparts.

This study's major hypothesis is the null: experimental (E) and control (C) groups (those with preschool and those without) do not differ over the four years on characteristics of Ability-Achievement, Creativity, and Home Learning Environment. To reject the null hypothesis, an alpha of .05 was required.

The three characteristics were measured by 93 variables assigned as follows: (a) Ability-Achievement: 63 scores summarizing report card data, and individual and group tests of ability and reading achievement; (b) Creativity: 5 scores from three administrations of the Children's Individual Test of Creativity (CITOC); (c) Home Learning Environment: 17 scores derived from the Questionnaire for Parents as Teacher (QPAT) and 18 facts pertinent to parent-child sociology.

Only 50 of the original 76 Negro pupils could be found (dispersed into 12 schools) for follow-up in spring 1968. During summer 1968 the QPAT was administered to all parents. Written to measure parent-child interaction, and item-sorted into the affective taxonomy, the 150-item QPAT investigated six major areas of children's psychological development as self-reported by their parents: Intellectual, Achievement, Language, Social, Creativity, and Psychomotor. QPAT validity and reliability were assessed as not robust, and needing technical refinement.

Data were analyzed by common measures of central tendency, F ratio, correlation, chi square, analysis of covariance, and factor analysis.

Findings. The null hypothesis was rejected for five Ability-Achievement, three Creativity, and six Home Learning Environment variables. Es and Cs were statistically identical on 85% of all measures.

The original preschool Binet post-test favored Es. Analysis of covariance found no other significant differences for reading or IQ. A trend of cumulative deficit in reading achievement was evident. Virtually all meaningful Ability-Achievement differences measured between Es and Cs disappeared shortly after entrance into traditional primary school programs.

In each comparison, later CITOC scores differed significantly from earlier, indicating a positive function with CA for the Es sampled. These same children scored significantly higher in QPAT Creativity than did C peers.

Various family differences found in sociological profiles were judged to be educationally unchangeable.

Chi-square analyses distinguished Es from Cs on 11 QPAT items; 87 other significantly different responses separated the sexes in six comparisons. QPAT items influencing differences clustered within these levels of the affective domain (in rank order): 2.0 Responding, 1.0 Receiving, and 3.0 Valuing. QPAT instrumentation was weakened primarily by several conditions of restricted range.

Conclusions and Recommendations. Faced with fading preschool gains in kindergarten and cumulative reading deficits in second grade, disadvantaged children need to receive continuity of enrichment with the same teacher beyond preschool, with formative

as well as summative research focusing on longitudinal effects of such carefully planned programs. Creativity measures offer promise as grouping criteria for more effective learning. Process-oriented assessment of learning environments is encouraged, perhaps through observational studies of families with diverse ethnic, social, economic, and national backgrounds.

129. Thomas, Tanya Jean. Instructor-Directed and Child-Directed Sequences in Creative Mask Production for Disadvantaged Preschool Children. University of Utah, 1970. 107p. Adviser: Gabriel M. Della-Piana. 70-23,068.

The general milieu of art instruction at the preschool level seems to focus on providing materials and opportunities for trial and error exploration without any systematic instruction or intervention. This study compared the effects of two different learning sequences, one child-directed (CD) and the other instructor-directed (ID) on the performance of four- and five-year-old children on the task of modeling a face out of clay. A control (C) group was included to provide a base rate comparison for maturational effects, practice effects of testing, and practice effects of manipulating the clay.

Thirty preschool children from economically disadvantaged families were randomly selected, and individually pretested with the Performance Scale from the WPPSI. The subjects were assigned to one of three racially mixed groups (ID, CD, or C) which were matched for WPPSI-PS IQ, sex, age, and number of subjects.

Each ID subject received an instructional unit, developed by a method approximating a Gagne task analysis of the sculptural skills necessary to make a representative face. The ID subjects were led through the procedure by demonstration, and their performance was aided by prompts and templates during the experimental phase.

The CD subjects were given the opportunity to follow their inclinations regarding sequence, use of materials, and requests for instruction. The CD condition was included to provide comparative data.

Two dependent variables were developed for the purpose of evaluating the clay masks produced by the subjects. A descriptive Checklist for Modelled Clay Masks (CMCM) was designed to provide a structural, proportional, and an objective index of the representational skills portrayed in the children's masks. A Q-sort ranking of the masks was completed in order to obtain a global aesthetic quality measure. Three judges, two professionals and one layman, were employed to evaluate independently each subject's mask. The masks created were evaluated by the judges on both dependent variables a total of three times: one month prior to the training session, at the completion of the session, and again two weeks later for retention.

Since the magnitude of the average correlations between the judges' scores on both dependent variables (.75 for the rank data; .98 for the CMCM data) was deemed satisfactory, the judges' scores for each mask were averaged, then these combined averaged scores were used for the two analyses of variance computations. The matching

variables (sex, WPPSI-PS IQs, and age) were not significantly related to either of the dependent variables, and the groups were sufficiently similar to each other with respect to the matching variables; therefore, a two-way repeated measures analysis of variance was carried out on both dependent variables. Significant ($p < .01$) Group X Phases interactions were obtained in both analyses. The following interpretations were made of the data: 1) For both dependent variables, the ID group clearly demonstrated the greatest gain; 2) the CD group manifested little change across phases for the checklist data and a downward trend for the rank data; 3) the C group demonstrated a trend toward increased mean scores for the checklist data, with the rank data revealing no clear trend.

In addition, the data were analyzed in terms of the instructional objective, and only the ID subjects met the criterion of nine subjects obtaining on their clay productions mean CMCM scores of ten or higher, and averaged ranks of five and one-half or higher on their post- and follow-up phases. On posttest the ID subjects also spent more time with their clay productions than did the CD or C subjects, which was interpreted to be a reflection of the greater reinforcement or interest value of the ID procedure.

In brief, although art production is probably a complex interaction of the child's cognitive ability, past experience, emotions, and perceptual-motor skills, a child's repertoire of modeling skills can be increased through programmed instruction incorporating a Gagne type task analysis and by applying such learning principles as immediate positive reinforcement, sequencing in small steps, providing verbal and nonverbal prompts, and requiring overt responses.

130. Nash, William Roscoe. Facilitating the Creative Functioning of Disadvantaged Young Black Children. University of Georgia, 1971. 87p.
Adviser: E. Paul Torrance. 72-2520.

The intent of the study was to see if higher creativity scores could be effected with disadvantaged young black children by providing stimulating experiences appropriate to psychological warm-up immediately preceding the testing of creative thinking abilities, both figural and verbal.

The Subjects (Ss) were 105 first grade children. A posttest-only group design was utilized, and the Ss were randomized into four groups, three experimental and one control. The three treatments included "irrelevant warm-up" stimulation (a free play session), "verbal warm-up" stimulation (dramatic story reading), and "physical warm-up" stimulation (role playing of animal behavior to music). Each treatment lasted a period of twenty minutes before testing. The control group received no stimulation.

Two measuring instruments were employed. Both are adaptations of activities from the Torrance Tests of Creative Thinking and are called the Figural Picture Construction Task (an individual measure)

and the Verbal Group Product Improvement Task (a small group measure). Torrance made the adaptations and has recently used them in experimental situations. The data were elaboration and title originality scores on the figural measure and fluency, flexibility, and originality scores on the verbal measure.

Analysis of variance for main effects yielded significance beyond the .01 level for both elaboration and title originality on the figural measure. On the verbal measure only originality reached significance ($p < .01$), although flexibility was close to $t^2 \approx .05$ level. No sex differences were found. Dunnett's Test for comparisons with a Control was applied to the data for individual comparisons of the treatment groups with the control group. The "verbal warm-up" and "physical warm-up" groups differed from the control ($p < .01$) for elaboration and title originality on the figural measure. The same two groups were significantly different from the control ($p < .05$) for originality on the verbal measure. The "physical warm-up" group achieved the same level ($p < .05$) for flexibility. In no instance did the "irrelevant warm-up" group (a free play warm-up) differ from the control.

It was concluded that it is possible to influence creative thinking with disadvantaged young children by providing experiences complementary to "loosening up" for creative functioning. The disadvantaged seem to respond well to creative activities, and it was recommended that school personnel further investigate the issue.

131. Rosen, Catherine Elkin. The Effects of Sociodramatic Play on Problem Solving Behavior Among Culturally Disadvantaged Pre-School Children. University of Georgia, 1971. 138p. Adviser: E. Paul Torrance. 72-2536.

It has been reported that advantaged Israeli kindergarten children exceed their disadvantaged peers both in the amount and quality of their "sociodramatic play" during free play. Sociodramatic play is said to occur when several children take on different roles and interact with each other in the context of a spontaneously created situation, as in playing house, doctor, etc. The generalizability of this Israeli finding to Black American disadvantaged kindergarteners was tested as a first objective, and confirmed.

The second objective was to determine whether training and practice in sociodramatic play would further problem-solving behavior. Pre- and post-experimental assessments of sociodramatic play and other behaviors were made by trained examiners on four intact classes of kindergarteners from disadvantaged backgrounds. The two experimental groups then received 40 days of instruction and practice in sociodramatic play, while the control groups participated in discussions and demonstrations. There was a significant increase in sociodramatic play in the experimental but not the control groups, indicating the feasibility of teaching sociodramatic play to disadvantaged children.

It was hypothesized that the acquisition and practice of sociodramatic play would lead to significantly more effective and creative problem solving behavior among experimentals than controls. In support of this hypothesis, the experimental children showed a significantly greater increase than the controls on both a composite index of group problem-solving behavior and of group performance ratings, as well as on the number of units used in the group product, based on the Torrance Group Construction Task.

A further hypothesis was that learning to use sociodramatic play would lead to greater effectiveness in solving problems requiring a maximum of cooperation and a minimum of competition for success, but that there would be no change in group effectiveness in situations requiring maximum competition among group members for success. This hypothesis, too, was confirmed, using the Madsen Cooperation Board.

Evidence for the hypothesis that acquisition and practice of sociodramatic play would lead to a reduction in the psychological distance between the child and other social stimuli was in the appropriate direction, though non-significant. However, at the second testing there was a significant inverse relationship, across all disadvantaged children, between level of play observed and psychological distance as measured by an adaptation of Kuethe's Social Schemas Technique.

Significant support was also obtained for the hypothesis that sociodramatic play experiences would lead to greater role-taking skills. This was tested both with regard to perceptual role-taking accuracy and accuracy of predicting others' preferences when these preferences differ from the child's own.

In short, the experimental evidence clearly and consistently supports the proposition that acquisition and practice of sociodramatic play improves the problem-solving behavior of culturally disadvantaged children.

It seems reasonable to suppose that this increase in problem-solving skills is accompanied by a generalized positive orientation in such children toward problem-solving behavior. Viewed from a broader perspective, these children are evolving a sense of competence and efficacy, and an improved ability to shift flexibly from one part of a situation to another, attributes that are necessary for furthering cognitive development.

Miscellaneous

132. Portugaly, Drora. A Study of the Development of Disadvantaged Kindergarten Children's Understanding of the Earth as a Globe. Columbia University, 1967. 303p. Adviser: Kenneth D. Wann. 68-5544.

This is a study of the development of disadvantaged kindergarten children's understanding of The Earth as a Globe. The study was

designed to explore the children's responses to a program of manipulative activities leading toward the understanding and attainment of certain geographic concepts inherent in the topic The Earth as a Globe. The program was developed with twenty-one children, ages five to six, in one of the kindergarten classes in P. S. 180, New York City.

Under the impact of expanding knowledge in the increasingly technical and complex society of our times, experts in the area of early childhood education judge that the central problem in kindergarten education today is its content. Not to underestimate the child's physical, social and emotional aspects of growth, there is increasing recognition of the need for fostering the child's cognitive growth as well as intellectual stimulation in today's preschool education programs. This is particularly true of kindergartens in depressed and culturally-deprived neighborhoods.

Recent studies and newer understandings of children's cognitive abilities also support the need to provide children with intellectual content in the early years of their growth.

The program developed in this study is based on Globalism, one of the major concepts suggested by experts in the field of geography. The sub-concepts underlying the idea of Globalism were identified and formulated as learning goals, dealing with spatial relations, earth-sun relationships, day-night and seasonal characteristics. These learning goals served as a basis upon which a program of manipulative activities was built and elaborated.

The conceptual framework of the learning goals served as a basis for developing a diagnostic instrument designed to measure concepts in geography that the children might have learned during their informal pre-kindergarten experiences. The instrument was also used as pretest and post-test, administered to the children before and after the program was practiced in the kindergarten. For the purpose of controlling the measuring of children's growth in knowledge in the topic The Earth as a Globe, a section of control items was annexed to the main test. These items were unfamiliar to the children and unrelated to the given topic.

The results of the test showed differences in scores between the first and the second administrations of the test with a mean increase of 23.3. The t-test for the mean difference was 10.585, significant at a level greater than .005 with (21-1) degrees of freedom.

Another method of data collection used ... the project consisted of daily notes taken by the researcher as the program was carried out. The data obtained were analyzed in terms of the children's responses to the program and in terms of teaching strategies which appeared to have resulted in the children's growth in knowledge.

The conclusions arrived at in this study suggest that this particular group of children did begin to develop basic understandings in geography, as they were presented in the topic The Earth as a Globe. The children studied were also able to deal with models and, use the tools of geographers. Although for these children the school

rather than the home was the main source of information, they began to show changes in attitudes toward learning activities and to develop intellectual curiosity.

The implications of this study indicate the need for more intellectual stimulation and intellectual content in kindergartens in depressed areas; for early root learnings as foundations for later learning; and the need for more knowledge about the effects of experience on children's cognitive growth.

135. Borosage, Vera. A Study of the Effect of Nursery School Experience On Intellectual Performance at Two Socio-Economic Levels. Michigan State University, 1968. 155p. 68-17,062.

The purpose of this study was to ascertain if nursery school attendance has any effect on the intellectual performance, as measured by testing instruments of pupils who come from various socio-economic backgrounds. Specifically, the study attempted to assess the effect of a nursery school experience of a conventional comprehensive nature on the intellectual performance of disadvantaged children from a lower class milieu and children from a middle class background.

To accomplish the stated purpose, a thorough review of the literature was conducted to become familiar with the changing philosophy regarding the effect of early experiences on intellectual development of children, and the role this has played on the advocacy of compensatory preschool programs for the culturally disadvantaged child. Some representative nursery school programs were described.

An experimental design was set up consisting of four groups of children, selected by social class, age and sex. Two social classes were represented: the disadvantaged lower social class and the middle class. One experimental and one control group was formed at each social class level. The independent variable was a nursery school experience over the period of one academic year.

Data consisted of: (1) description of the population; (2) description of the three testing instruments used in the study: the Stanford-Binet Intelligence Scale, Form L-M, 1960, the Peabody Picture Vocabulary Test, and the Bender Gestalt Test for Young Children; (3) information describing the components of the nursery school curriculum; (4) information dealing with the collection of data; and (5) computation and analysis of the data resulting from the subjects' performance on the testing instruments.

The major findings of the study may be summarized as follows:

1. The experimental treatment of a nursery school experience generally had no specific effect in significantly raising the I.Q. or in differential performance on any of the testing instruments.

2. There was some evidence, though not statistically significant, to support the effect of a nursery school experience. The lower class children who attended nursery school posted a mean gain in I.Q. between pre- and post-test scores on the Stanford-Binet while lower class children who did not attend nursery school posted a mean loss in I.Q.

3. There were significant social class differences in the performance on all three dependent variables (the testing instruments), all favoring the middle class children in both experimental and control groups.

4. There were sex differences in performance, especially in the lower class groups. Male subjects in both the experimental and control lower class groups generally posted a loss in I.Q. between pre- and post-test on the Stanford-Binet.

5. Study of correlations between test scores suggested that the Peabody Picture Vocabulary Test might be a better instrument to assess the intellectual potential of middle class children rather than lower class less verbally oriented children while the Bender Gestalt might be a better instrument for evaluating lower class children.

In addition to these findings, implications of these findings for further research were discussed.

134. Lietz, Enno S. An Investigation of the Perceptual-Motor Abilities of the Economically Disadvantaged Kindergarten Child as Compared to the Advantaged Kindergarten Child. Southern Illinois University, 1968. 106p. Adviser: J. Murray Lee. 69-6282.

If was the purpose of this study to determine if the perceptual-motor ability of the advantaged kindergarten child was any different from that of a kindergarten child who comes from an economically disadvantaged home. Also, to ascertain if there were any areas of perceptual-motor ability where the disadvantaged child may show strengths or weaknesses as compared with the advantaged child. The relationship of sex and differences between Negro and white disadvantaged were also investigated.

This study tested the following null hypothesis:

1. There are no differences between the boys and girls of the economically disadvantaged and those of the advantaged in each of the four areas of perceptual-motor ability.

2. There is no difference in perceptual-motor ability between the Negro and white disadvantaged child.

One hundred subjects were used for this experiment. Their ages ranged from sixty-four to seventy-five months of age and all were engaged in a kindergarten program. Fifty children were from economically disadvantaged homes while the other fifty were classified as advantaged. The criterion for classifying the disadvantaged child was that of a family income of less than three thousand dollars a year. The advantaged child was one who came from a home where the income was above three thousand dollars a year. Twenty-eight children of the disadvantaged group were Negro children from a Cairo, Illinois, headstart program; while the twenty-two white disadvantaged and fifty advantaged were found in kindergarten classes in Staunton, Illinois. The two communities are of comparable size.

Since no perceptual-motor test for this particular age group was commercially available, the criterion was an objective, reliable and

valid investigator-made instrument. A revision of the Purdue Perceptual-Motor Survey with nine subtests was individually administered to all one-hundred subjects. The nine subtests measured the four areas: body balance and posture, body image and differentiation, perceptual-motor match, and form perception. Each test was given away from the classroom to avoid any learning that might take place as a result of observing. The subjects received a score commensurate with his performance in each of the four areas which made a composite score for his perceptual-motor ability.

The findings and conclusions of this investigation relating to the previous hypothesis can be summarized as follows:

1. There was no difference found in the perceptual-motor ability of the boys and that of the girls. The advantaged boys performed as well as the advantaged girls and likewise for the disadvantaged group.
2. The advantaged children, as a group, scored significantly higher in each of the four areas tested. However, although the middle class child appears to be superior in these skills, the differences are of various magnitude with the greatest being in form perception and the least difference in body image and differentiation. Since there was a significant difference found in each area in favor of the advantaged child, it appears that the overall perceptual ability of the advantaged children is superior to that of the economically disadvantaged.
3. There was no difference found in the perceptual-motor ability of the disadvantaged Negro and disadvantaged white child. However, there was one area of perceptual-motor skills in which there was a difference between the Negro and white disadvantaged. This was perceptual-motor match with the white child being significantly more skillful in this area.

135. Mueller, Joseph Frederick. Exploratory Study of the Psychological Ecology of a Directed Lesson in a Nursery School Setting. Wayne State University, 1968. 119p. Adviser: Jacob S. Kounin. 71-19,162.

This study investigates the modes of behavior of six student teachers doing their practice teaching at Wayne State University Nursery School at Jeffries Homes, Detroit, Michigan. Video tapes of 36 directed lessons involving 42 children who ranged in age from two and one half to five years of age were filmed from May 17, 1967, to June 13, 1967. Each teacher taught six lessons with two different age groups of children.

This study was ecological in aim in that there was an attempt to understand what a teacher does without controlling any of the environment. The investigator attempted to view the data in as near a neutral position as possible to establish behavior categories. The teacher categories were developed from concrete teacher behaviors which involve inducement activities. The four teacher dimensions developed in this manner were: Cognitive Demand, Prop Setting Bungles, Activity Language Bungles, and Impeding Discovery.

The teacher dimension of Cognitive Demand refers to teacher behaviors which require children to become involved in a thinking process. The teachers' requests, demands and questions were coded on a four-point scale.

The teacher dimension of Prop Setting Bungles refers to a lack of planning, awareness, or judgement on part of the teacher in the manner she uses, materials, props and/or the setting.

The teacher dimension of Activity Language Bungles reflects a lack of planning, insight, awareness, or judgement on the part of the teacher in the manner in which she attempts to induce activities and in her use of language.

The teacher dimension of Impeding Discovery refers to acts and statements of a teacher that could interfere with the discovery of a child.

In addition, eight classifications of children's behavior were developed ecologically from the directed lessons. These were: Active Task Appropriate, Expected Task Appropriate, Probably Task Appropriate, Irrelevant Appropriate, Probably Not Involved, Definitely Not Involved, Task Deviancy and Deviancy.

The frequency of the teacher behavior on the four dimensions were analyzed by chi square goodness of fit test. This analysis revealed that teachers did show significant differences for the four teacher dimensions.

The frequency of children's behavior was analyzed by an exhaustive chi square procedure. This analysis revealed that the frequency of children's behaviors did differ significantly in each of the eight behavioral categories. The overall analysis revealed that teachers and the frequency of children's behavior were associated.

Spearman rank order correlations were calculated for the rankings of teachers on the four dimensions and the rankings of children's behavior.

This analysis reveals that Cognitive Demand showed significant positive correlations with Task Appropriate and Total Appropriate Behavior and significantly negative correlations with Noninvolvement. The results tend to indicate that a high cognitive demand teacher will have more Appropriate Behavior and less Deviancy and Noninvolvement.

For all six lessons, Prop Setting Bungles correlated significantly with Task Deviancy in a positive direction. Prop Setting Bungles did not correlate to any degree with Deviancy and Noninvolvement. Low scores on Prop Setting Bungles tended to increase Appropriate Behavior.

For all six lessons Activity Language Bungles correlated significantly with Noninvolvement in a positive direction. The teachers who scored high on Activity Language Bungles tend to have less Appropriate Behavior, more Task Deviancy and more Noninvolvement.

For six lessons the dimension of Impeding Discovery showed significantly negative correlations with Total Appropriate Behavior but not with Task Appropriate Behavior; however, the relationship is in the expected direction in that teachers who impede discovery tend to have less Appropriate Behavior.

Behavior descriptions are summarized for high and low cognitive demand teachers, high prop setting bungle teachers, and high activity language bungle teachers. Implications of the finding for education, and suggestions for future research were developed.

136. Dugger, Marguerite W. Rapson. A Descriptive Study of the 1966-67 Kindergarten Intervention Program in the Salina School, Dearborn, Michigan. Wayne State University, 1969. 172p. Adviser: Tom Coleman. 70-3421.

A Kindergarten Intervention Program (KIP) was initiated by the Dearborn Schools for early identification of children's assets and liabilities followed by individualized management and remediation. The objective was to alter the pattern of poor achievement and early school leaving established in the past in the Salina School.

The program was the subject for this study which described Dearborn's holistic approach to the education of these disadvantaged children and established baseline data for assessing individuals, various groups and the project as a whole.

The study addressed itself to the following questions: 1. Is Salina typical of other urban schools of low socio-economic status? 2. Are models from other intervention programs appropriate? 3. Are Salina pupils of "average intelligence"? 4. Do they make gains comparable to those in other special projects? 5. What factors seem to interfere with achievement?

Secondary objectives of the study were to explore the use of the Brenner Readiness Test and to suggest ways in which data may be used more effectively by school personnel.

Children participating in the intervention program were the 210 entering Kindergarteners. Thirty remained in the adjoining Miller School District since they demonstrated good potential for school success; 86 were assigned to four regular Kindergartens at Salina School; the remaining 94 were identified as less mature, less intellectually able, and hence in need of the total intervention service.

Data on 160 pupils were subjected to statistical analysis, utilizing correlational type analysis. Some limited use of the F test was made in the form of a multiple T test. All correlations, means, standard deviations were derived by an IBM 1620, through use of a Pearson-Product moment coefficient program. Charts and graphs provided another type of data study reflecting individual differences.

The study confirmed that Salina is not typical of other urban schools of low socio-economic status on the basis of racial and ethnic composition and pupil transiency. Thus, intervention models borrowed from typical inner city schools were not appropriate.

Binet scores for 1966-67 and 1968 showed a normal distribution of ability, falling slightly below expectancy with a mean of 95.4 on pre-test and slightly above on post-test with a mean of 102.3

Intelligence quotients for both the regular and KIP groups showed a significant rise. Non-KIP subjects ($N=58$) rose 4.9 ($P < .05$) and KIP ($N=66$), 9.0 ($P < .01$)

Binet scores were plotted on original graphs to compare growth with expectancies hypothesized by the Bereiter-Englemann formula.

In all cases except one, the Metropolitan Test correlated at .44 ($P < .05$) or better with IQ and Brenner scores. Although high IQ children may reveal immaturity on the Brenner, there is less chance that low IQ children will appear mature. Patterns on graphs suggested that males and females may differ in maturity and style of learning at time of school entry although statistical analysis failed to reveal significant differences in the Brenner studies.

Teacher ratings of pupils correlated highly with results of formal tests.

Complicating factors found among children not achieving or adjusting were minimal cerebral dysfunction, mental retardation, hearing loss, physical or psychological abuse, multiple social and family problems, gross deprivation of experience and poor nutrition and physical care.

Because the study tends to indicate the effectiveness of the intervention program, a more tightly controlled project using experimental design is warranted. The value of continuous inservice of staff is indicated. The modest mean score of 79.8 on the Metropolitan for the more able pupils warrants further investigation.

Other recommendations are for (1) follow-up of KIP I in 1967-68, -69; (2) study of Brenner and Metropolitan reliability; (3) consideration of possible differences in maturity and learning style between males and females at time of school entry; and (4) investigation of impact on IQ of first year in school.

It is apparent from this study that there is no "Socially Disadvantaged Child," but a wide variety of children having distinctly unique characteristics. Education planned for them must provide for these differences.

137. Hunt, Anne Johnson. Anthropology Achievement of Normal and Disadvantaged Kindergarten Children. University of Georgia, 1969. 170p.
Adviser: Joseph C. Bledsoe. 70-10,197.

The purpose of this study was to develop a kindergarten social studies unit based on selected key concepts of anthropology and to evaluate the achievement in anthropology for preprimary children. The relationship of selected pupil characteristics to gain in anthropology was also examined.

Eleven Georgia public kindergarten classes which were field centers of the Research and Development Center in Early Educational Stimulation at the University of Georgia participated in the study. For two months 160 normal and disadvantaged experimental subjects were taught 36 daily lesson plans. The experimental lessons were adapted from the grade one material of the Georgia Anthropology Curriculum Project. The 40 subjects in the control group did not receive the instruction. Emphasis of the unit was given to learning the methodology of the anthropologist and the development of the concepts of cultural universals, cultural variation, and enculturation.

Anthropology achievement was measured by the grade one test prepared by the anthropology project. The group test contained 30 items, each with four picture options. The subject indicated his response by marking the picture he thought was correct.

The following conclusions were reached:

1. Both normal and disadvantaged kindergarten children can learn anthropology organized around selected key concepts.
2. Socio-economic status as measured by Hollingshead Index had no significant effect on anthropology achievement.
3. The sex of the child had no significant effect on the ability of the child to learn anthropology.
4. Caucasians achieved significantly better than Negroes.
5. Mental age was more important in learning anthropology than chronological age. The Stanford-Binet intelligence score was significantly related to anthropology gain, whereas, chronological age was not significantly related.
6. The children enjoyed using the anthropologists' scientific language and were able to make cross-cultural comparison among three cultures.

138. Alford, Roy W., Jr. Teaching Mathematical Concepts to Rural Preschool Children Through a Home-Oriented Program. University of Virginia, 1970. 168p. 70-26,616.

It was the purpose of this study to assess the viability of the Appalachia Preschool Education Program as a means of providing sound and effective preschool experiences in mathematical skills and concepts for rural children. The Appalachia Preschool Education Program was for rural children of ages three, four, and five, and it was designed to be presented to the children in or near their homes by television broadcasts, home visitations, and traveling classrooms. The curriculum for the total program was built around a set of behavioral objectives; many of the behavioral objectives were derived from mathematical concepts. This study was concerned only with the mathematical objectives of the program.

Three intervention elements were planned: a one-half hour television broadcast, five days a week for thirty-four weeks, receivable on home sets; a weekly home visit by a paraprofessional; and a weekly group experience in a traveling classroom for ten to fifteen children at a time.

Four treatment groups were established:

- Treatment I (T_1) Intervention through television broadcasts, home visits, and traveling classroom.
 - Treatment II (T_2) Intervention through television broadcasts and home visits.
 - Treatment III (T_3) Intervention through television broadcasts only.
 - Treatment IV (T_4) No intervention.
- The research design called for stratification by age, sex, and treatment. The sample consisted of not fewer than four nor more than six children within each cell, with a cell defined by age (three, four, or five years), sex (male or female), and treatment (T_1 , T_2 , T_3 , T_4). A total of 121 children were in the sample.

The children of groups T₁, T₂, and T₃ were from rural farm or rural non-farm homes in the West Virginia counties of Fayette, Mercer, Raleigh, and Summers. The control group (T₄) children were from similar homes in Giles County, Virginia, where the television broadcasts could not be received.

A standardized test and a curriculum specific test designed for the study were used to secure data. The Peabody Picture Vocabulary Test, commonly used to measure the intelligence of children, was administered as a pretest and as a post-test. The Appalachia Preschool Mathematics Test, administered as a post-test only, consisted of forty-eight items derived from those behavioral objectives for the program which related to mathematical concepts. The APMT had a reliability of .85 as determined by the Spearman-Brown formula. Analysis of variance and the Newman-Keuls Sequential Range Test were used to determine the statistical significance of the results.

FINDINGS

The four treatment groups were not significantly different at the beginning of the intervention period, as measured by the PPVT. Post-test results of the PPVT indicated that groups T₁ and T₂, which received the most intensive intervention, had gained significantly more than groups T₃ and T₄.

Results on the APMT indicated that group T₂, with television and home visits, had gained significantly more than any one of the other three groups, and that group T₁, with television, home visits, and traveling classroom, was significantly better than the control group.

Boys and girls were not significantly different on any measure. On every measure, there was a significant difference between age groups in favor of the older children.

It was concluded that mathematical concepts and skills can be taught through a home-oriented program under the conditions of this study. A program of two elements (television and home visits) or of three elements (television, home visits, and traveling classroom) appears to be effective in presenting a home-oriented preschool program to rural Appalachian children, but intervention by television alone does not appear to be effective.

139. Colton, Frank V. A Pilot Study of Concept Attainment and Incidental Social Learning of Integrated and All-White Kindergarten Children Resulting From Viewing Video-Taped Demonstrations by Both Black and White Children. Wayne State University, 1970. 142p. Adviser: John Gordon, Jr. 71-17,250.

Two problems of current significance served as the basis for the investigation reported here. The first is an issue which probes the appropriateness and effectiveness of using the medium of television to achieve some basic cognitive goals in kindergarten. The second stems from the general problem of the continuing polarization of black and white people in this country.

The notion that techniques employed by the children's television series "Sesame Street" could be used to help solve these problems

prompted the present study. "Sesame Street" has been acclaimed because it has proven it can hold young children's interest, while teaching them letters, numbers and even simple concepts. The series, in directing its programs toward a nation-wide audience of young children, some of whom have never even seen a child of a color other than themselves, has been showing youngsters that other children who might look "different" really aren't "different."

Therefore, the purpose of this study was to obtain pilot data which would supply partial answers to this two-part question: Could the tremendous potential of the television medium be used to teach kindergarten children simple concepts and simultaneously help them become acquainted with different colored children so that changes might occur in their vicarious social choice of "preferred companions" which would reflect a less polarized view?

An integrated and an all-white kindergarten class were selected as populations for the investigation. Children from each class were randomly assigned to view video-taped television sequences designed for the study which featured either a black or white child in a "leadership" role as classmates helped him demonstrate simple concepts appropriate for kindergartners to acquire. An instrument was developed and piloted which measured attainment of the concepts and the "preferred companion" choices of the subjects both before and after they had viewed the video-taped sequences.

The major results are as follows:

1. Both the integrated and all-white populations acquired some of the concepts demonstrated in the videotapes. ($p < .05$)
2. Initially, both the integrated and all-white populations chose more "preferred companions" of their color than they did of an opposite color. ($p < .01$)
3. The all-white kindergartners did not choose more "preferred companions" of their color than did the integrated children. (The integrated class experience had not affected choice patterns of unknown children)
4. Both populations did not choose "teachers" of their color as "preferred companions" more after they had seen the same color "teachers" in videotaped sequences. (Our choice of who would play the "teacher" turned out to be the pre as well as post choice of the children. Our error)
5. Both populations did not choose more "teachers" of the opposite color as "preferred companions" after they had seen the opposite color "teachers" in videotaped sequences. (Confounded somewhat by previous findings)
6. The integrated children did not choose more "teachers" of the opposite color as "preferred companions" than did the all-white subjects.
7. High concept attainers (upper-half) did not demonstrate more pre-post change to opposite color "teachers" as "preferred companions" than low concept attainers.

In summary, with these pilot populations, the data indicated that although gains were made in attaining some of the concepts, there was no pre-post change in the choices of "preferred companions" by the integrated or all-white kindergarten children as a result of viewing either unknown same, or opposite color children portraying "teachers" in videotaped sequences. Why some of the questions used as cues for selecting pictures of "preferred companions" elicited Opposite color choice more than others is also discussed.

140. Estrada, Bette S. Production Deficiency of Nonverbal Mediators in Young Rural Black Children. The Florida State University, 1970.
79p. Adviser: Laurel L. Schendel. 71-7000.

Recent studies suggest that young children's organization in retention behavior is far more often characterized by a production deficiency, or a failure to spontaneously employ mnemonic-mediation skills at their disposal, in contrast to a mediation deficiency, or the failure of the skills to mediate even though used. Studies of the development of the transition from production deficiency to production of these skills, both verbal and nonverbal, were reviewed. A knowledge of the psychological structure underlying this transition is important in a purely heuristic sense, but in addition, can yield necessary information for the sequential training of such skills. Since, with only one exception, the major studies reviewed focused on average or nondisadvantaged children, the present study was proposed with disadvantaged rural black children with the expectation that previous findings would indeed generalize to these children.

Ss were 20 kindergartners and 20 first graders who qualified as disadvantaged both on the basis of their isolated rural residency and on the basis of various social and economic factors. Ten children from each age level were randomly assigned to one of two experimental conditions.

The nonverbal task employed was designed to externalize as much mnemonic activity as possible for observation, and required the child to reproduce a pattern of six colored geometric forms after these forms had been removed from sight. The child was given a set of small paper replicas of the colored wooden forms and told he could use them to help himself remember the pattern he subsequently was to reproduce. By using the paper forms to make a copy of the pattern shown him, the child could provide himself with a nonverbal, ikonic mediator for his subsequent reproduction of the pattern. Experimental suggestions were introduced to see if the production and utilization of these nonverbal mediators could be induced when they did not occur spontaneously. Ss at each age level were observed in each of two conditions which differed in the strength of the suggestion to produce the nonverbal mediator.

Results provided additional evidence in support of a production deficiency rather than a mediation deficiency hypothesis for young children's behavior in this type of task: more first grade than kindergarten Ss spontaneously produced mediators while more kindergarten

Ss never produced mediators; and kindergartners required stronger suggestions to produce mediators than did first graders.

In addition, the performance of the disadvantaged Ss in this study seemed to indicate that even though their transition from production deficiency to production of models exactly paralleled that of more average children, there was clearly a lengthened delay in their spontaneous employment of such models. It is suggested that future studies provide a better focus on the social class variable, for example by providing for additional and varied types of children whose performance might be compared.

In addition, it is suggested that future studies concentrate on designing tasks which would externalize an optimal amount of mnemonic-mediation behavior, this at younger and younger ages as well as with children of varied backgrounds.

141. Henrikson, Harold Arthur. An Investigation of the Influence of Teacher Expectation Upon the Intellectual and Achievement Performance of Disadvantaged Kindergarten Children. University of Illinois at Urbana-Champaign, 1970. 100p. 71-14,791.

The purpose of this study was to investigate the influence of teacher expectation upon the intellectual and achievement performance of disadvantaged kindergarten children, and to determine if there were a difference between the achievement of children expected by teachers and the actual achievement of disadvantaged kindergarten children.

Fifty-one children, both boys and girls, Negroes, Spanish surname and Caucasians, were the subjects of this study. The Slosson Intelligence Test, and The ABC Inventory were the pretest and posttest measurement instruments. A letter sent to the ten teachers in the study during the second week of school was the method used to generate within the teachers an expectancy advantage for designated pupils in their classrooms. A second letter, asking the teachers to rank children on the basis of expected performance on the Metropolitan Readiness Test, was the method used to provide a measurement of the achievement of children expected by teachers, to be compared with actual achievement scores obtained on the readiness test.

The prediction that there would be a positive correlation between teacher ranking of expected achievement scores and actual achievement scores was confirmed, with correlations between .90 and .93 obtained.

Negro boys were the only group in the study to reach the .05 level of significance in intelligence score mean gains through the generation of an expectancy advantage. This significant difference was present, however, not because the experimental Negro boys made such a large mean gain, but because they gained so much in proportion to the intelligence score mean gains made by the contrast group of Negro boys.

Some striking differences were found in achievement scores, however, as all the experimental sub groups had mean gains on achievement raw scores that were greater than the mean gains of the contrast groups. A mean difference of 17.1 points between the experimental and contrast

groups in achievement mean gain scores was manifest across all conditions and was significant ($p < .005$). Such evidence leads to the conclusion that the concept of self-fulfilling prophecy is indeed present, and pervasive within this particular segment of the study. At the same time, the results of the generation of expectancy advantage in this study speak to the prior attitudes the teachers held of the disadvantaged child as an achiever, confirming the viewpoint that teachers, generally, have negative expectancies for the disadvantaged child.

Compensatory educational programs are based on the belief that the failure of the disadvantaged child in the classroom rests within himself, and that the child must be compensated for this failure. The findings of this study would indicate, however, that a change in the quality of the child's education could be effected through nothing more than a change in the teacher's expectations of his abilities in the classroom.

142. Puryear, Ruby Hamilton. The Effect of Direct Teaching on Representational Categorization in Disadvantaged Negro Kindergarten Children. Columbia University, 1970. 140p. Adviser: Millie Almy. 71-1113.

This study was concerned with the developmental lag exhibited by disadvantaged Negro kindergarten children in combining pictorial materials into categorical groupings on the basis of conceptual rather than perceptual criteria. Its underlying assumption was that the life experience of these children had not been organized in such a manner as to naturally induce such skills at the expected age level. The objective, therefore, was to induce such skills by direct teaching.

The method used was a case-study training experiment of the test-teach-test design. The subjects were 18 Negro kindergarten children from a depressed neighborhood who ranged in age from 4 years, 10 months to 6 years and in IQ from 65 to 101, as measured by the Wechsler Preschool and Primary Scale of Intelligence.

Nine children comprised the experimental group and were given individual practice in picture sorting. Each child received 3 or 4 twenty-minute practice sessions. The teaching strategy provided for the guidance of the learning by conceptual verbal cues, for cognitive conflict in the presentation of the stimuli and for a learning set organization of the practice trials. The Sigel Categorizing Test was used for pre- and posttesting. The training materials consisted of pictures of common objects such as toys, clothes, utensils, etc. taken from children's preschool learning games.

The specific purpose of the training was to change the subjects' choice of criteria for grouping from perceptible to inferred stimulus attributes. The consistent tendency to use conceptual attributes was designated as an inferential set and the learning experience was designed to induce this set.

All 9 subjects learned the inferential set. Age, IQ, sex, and initial skill level appeared to be unrelated to the improvement effected by the training.

The following conclusions were drawn: (1) the initial developmental lag persists in the absence of direct teaching; (2) improvements from teaching are not maintained without further practice but are immediately reactivated by appropriate cues after a period of no practice; (3) the effectiveness of the training was due to the teaching strategy and the related examiner-subject interaction; and (4) present methods of measuring categorizing skills might be revised to provide more appropriate instructions for presentation of the task and more adequate behavior sampling.

143. Riechard, Donald Edward. The Acquisition of Selected Life-Science Concepts by Beginning Kindergarten Children from Three Different Community Settings. The Ohio State University, 1970. 152p. Adviser: Marlin L. Languis. 70-26,353.

The major problem investigated in this study was to assess the acquisition of selected life-science concepts by beginning kindergarten children from three different community settings--inner-urban, outer-urban, and rural-farm. Subproblems dealt with the associations of thirty-one physical, mental, and socio-cultural variables with performance on the Life-Science Concept Acquisition Test (L-SCAT) and the usefulness of the variables as predictors of performance on the L-SCAT.

The L-SCAT, developed by the investigator, contained twenty-one sets of colored pictures. The pictures represented thirty-five concept items distributed among the seven Biological Sciences Curriculum Study (BSCS) content themes. The L-SCAT was administered individually to each subject as a picture-stimulus structured-interview. As a set of pictures was presented to a subject, he was asked to respond nonverbally to a statement about the pictures by pointing to a specific picture or part of a picture. He was then asked to verbalize about his selection. Each subject received a nonverbal and a verbal score on the test as a whole and on each conceptual theme. The summation of the nonverbal and verbal scores resulted in a total score.

The sample population was composed of fifty-one beginning kindergarten children. Each community setting was represented by a sample of seventeen subjects.

Among the general findings and conclusions of this investigation were (1) there were significant differences, at the .05 level, among the scores made on each of the L-SCAT measures (total, nonverbal, and verbal) by the subjects from the three community settings; (2) based on the subjects' mean scores on each of the L-SCAT measures, the community setting rank order, from low-to-high, was inner-urban, rural-farm, and outer-urban, respectively; (3) there were significant differences, at the .05 level, among the total scores made by the subjects from the three community settings on six of the

seven conceptual themes; (4) there were significant correlations, at the .05 level, among the scores made on the L-SCAT by the subjects from the three community settings and several of the physical, mental, and socio-cultural variables; (5) when all of the physical, mental, and socio-cultural variables were used as predictors, a subject's I.Q. and his chronological age were the first and second most useful variables, respectively, in predicting performance on any of the L-SCAT measures--the correlations were positive; (6) when socio-cultural variables alone were used as predictors, the number of years education of the subject's mother and the presence of younger siblings were the first and second most useful variables, respectively, in predicting performance on the total and verbal L-SCAT measures--the correlations between L-SCAT performance and number of years education of the mother were positive; the prediction favored subjects without younger siblings to outperform those with younger siblings; (7) when predicting performance on the nonverbal L-SCAT measure from socio-cultural variables alone, it was found that the number of years education of the subject's mother and the subject's community setting were the first and second most useful variables, respectively--the correlation between L-SCAT performance and number of years education of the mother was positive.

144. Sandy, Claude Ashburn. The Effects of Material Reward, Sex, Race, and Socioeconomic Strata on the Pintner-Cunningham Primary Test Scores of Kindergarten Students. University of Virginia, 1970. 95p. 71-6717.

A total of 187 subjects in 12 classes was identified as either middle or lower socioeconomic strata, based on two of the form characteristics on Warner's Revised Index of Status Characteristics. All classes were administered either form A or B of the Pintner-Cunningham Primary Test under normal testing conditions. Approximately three weeks later they were administered a circle cancelling test devised by the investigator. The test was relatively simple and a high degree of success was achieved. All subjects in the six randomly selected reward classes received material reward (an assortment of toys, candy, potato chips, etc.). The non-reward classes did not receive material reward, and a special point was made to avoid any verbal reward to either group. One to three days later, they were administered the alternate form of the Pintner-Cunningham under the same reward condition.

Of the 187 subjects identified, 132 were identified as lower and 55 as middle socioeconomic strata. Sixty-two lower and 30 middle socioeconomic strata subjects were rewarded. The hypothesized improvement in measured intelligence among rewarded lower socioeconomic strata subjects was not effected. Although an overall mean IQ increase of 6.66 points did occur for all subjects, the differences between the four groups identified by socioeconomic strata and reward condition were non-significant. Lower socioeconomic strata subjects, who had a lower mean IQ on pre-testing,

still had a lower mean IQ on post-testing regardless of the reward condition. It was concluded that perhaps it was not the lack of effectiveness of material reward that accounts for the negative findings; rather, the material reward should have been absolutely contingent upon performance or should have been somewhat more remote, or perhaps more time was needed for children of this age to become accustomed to the material rewarding situation.

Another possible explanation is that, at this age, middle socio-economic strata children, as well as lower socioeconomic strata children, are motivated by concrete, tangible rewards.

An additional finding, that whites showed higher IQ gains than Negroes, regardless of reward condition, appear to be related to the difference in pre-test IQs. Both groups showed significant gains, and the ratio of gains to pre-test scores was similar for the two groups.

145. Braff, Rhoda A. Imagery, Activity Level, and Learning Modality Preference as Indications of Sensory-Motor Stage Behavior in Low-Income Kindergarten Children. New York University, 1971. 140p..
Adviser: Mae Maskit Lord. 72-11,446.

This research has investigated whether certain disadvantaged children have had delayed progress through Piaget's developmental stages. Piaget's developmental theory proposes that the internalization of imitation is necessary for a child to develop adequate imagery and to progress out of the sensory-motor stage into the pre-operational and operational stages. Certain low-income children may not have had sufficient and appropriate imitation experiences to develop adequate imagery and thereby progress out of the sensory-motor stage. It has been hypothesized that certain of these low-income children who are relatively active in the classroom, are evidencing sensory-motor stage behavior even though they are five years of age. Their activity, it has been suggested, is a means of gathering information about the environment.

The present study explored the relationship between children's activity levels, their memory imagery, sex gender, and intelligence. An attempt was also made to determine whether a kinesthetic learning modality preference as contrasted to an auditory, visual or mixed modality preference was related to sensory-motor stage behavior.

A sample of 59 disadvantaged kindergarten children from the Highland Park, Michigan schools was used in the study. Each child's activity level in the classroom was measured by use of pedometers on both the ankle and wrist. The children were given the Benton Visual Retention Test and the ITPA Visual Sequential Memory subtest to measure their memory imagery ability. The New York University Modality Test was given to determine the child's preferred mode of learning.

Three hypotheses were advanced. The first hypothesis stated that visual memory imagery in children is more related to a child's

activity level than to the child's sex. Since intelligence scores were available for each child, I.Q. was also included as an independent variable. A multiple regression analysis was performed three separate times using wrist, ankle and combined activity as the dependent variable. Separate analyses were made for wrist and ankle activity because the low correlation obtained between them indicated that they should not be considered as different aspects of the same "activity" variable. The findings did not support the specific hypothesis:

The second hypothesis proposed that there would be a relation between preferred mode of learning and activity level, such that children with a kinesthetic modality preference would have the highest activity levels in the classroom as compared to children with an auditory or visual modality preference, or no modality preference at all. An analysis of variance was performed. Since this analysis was significant, a multiple comparisons test was performed to determine which modality groups had the highest and lowest activity means. Contrary to the proposed hypothesis, the kinesthetic modality group did not have the highest activity level, whereas the no modality preference group did. As suggested, the visual modality group had significantly lower activity levels. The usefulness of knowing a child's modality preference for remediation was discussed as well as the implications for teaching children with mixed modality learning.

Hypothesis III proposed that visual memory imagery would be related to the prediction of modality group membership (determined by a measured preference) as compared to sex. Intelligence was again added as an independent variable. Visual memory imagery was the only significant variable in a multiple discriminant analysis to predict modality group membership. Hypothesis III was therefore upheld. In addition, a multiple discriminant analysis was performed adding additional activity level as an independent variable predicting modality group membership. In this analysis, both imagery and activity level were significant predictors.

Three supplementary analyses were also performed to investigate the relative effects of the different variables in the study on a child's score on each of the three modality tests.

Implications of the results of the study were discussed with specific reference to Piaget's theory and the possibility of a progression in the development of learning modality preferences in children paralleling Piaget's developmental stages. Some suggestions for future research were made including proposals for studies into mother-infant interaction patterns in low lower-income families, investigating whether imitation, as Piaget suggests, is the basis for imagery development, and creating assessment instruments which would provide some measure of a child's potential for stage advancement.

146. Brown, Darrell Lee. Variations in Test Response of Preschool Children by Sex and Socioeconomic Level Related to Guilford's Structure-of-Intellect. University of Pittsburgh, 1971. 152p. 72-7897.

The purposes of the investigation were to determine (a) if there were significant correlations between specific mental abilities measured by the 1960 Stanford-Binet Scale and the social status and sex of preschool children, (b) which specific abilities were most closely correlated to sex and social status and (c) if the relative magnitudes of the correlations could be predicted from J.P. Guilford's Structure-of-Intellect (SI) theory of intelligence. The problem was one of clarifying the nature and magnitude of relationships between specific preschool tasks on the Binet and the social status and sex of the subjects. Further, the directions of the correlations were predicted in SI terms after relating prior research on these variables to Guilford's model.

Stanford-Binet test scores and socioeconomic data were compiled on 552 preschool children between the ages of three years and two months and four years and seven months, "in an all white community in Pennsylvania over a two and one-half year period. Of these, 100 subjects were chosen at random for the study. Meeker's (1969) classification of Binet tasks was used to define the preschool level test items according to Guilford's SI model. Hypotheses predicted that phi coefficients would significantly favor high status children for Binet items measuring convergent thinking, semantic content and the more complex abilities along the Products dimension of the SI model. It was also predicted that phi coefficients would significantly favor girls for semantic items and would significantly favor boys for figural items.

Results supported predictions of significant correlations favoring the high status group and girls on items measuring semantic content. No significant correlations favored the low status group or boys. The type of items found most consistently to correlate significantly with the social status of preschool children were those which Meeker classified as cognition or comprehension items. Analyses of supplementary data also revealed significant correlations between test behavior ratings and both social status and sex of the subjects; these relationships showed that the high status group and girls received more favorable behavior ratings from examiners.

In general, the conclusions drawn from the investigation suggested (a) that preschool abilities measured by the 1960 Stanford-Binet Scale do relate differentially to the variables of socioeconomic status and sex, (b) that cognition and semantic items most frequently favor children from higher social status families, (c) that semantic abilities most frequently favor girls and (d) test motivation is a significant factor related to test performance that relates positively for high status children and girls. Considerable discussion was offered relating the results to test construction, school psychology, remedial education, preschool education, preschool sex differences and other issues.

147. Gaylor, Henry William, Jr. The Relationship Between Participation in a Non-Public School Administered Compensatory Preschool Educational Program and Subsequent Pupil Educational Development. United States International University, 1971. 233p. Adviser: Warren R. Baller. 71-25,390.

The purpose of the study was to measure the relationship between pupil participation in the Imperial Beach Compensatory Preschool Educational Program (Child Development Center of Imperial Beach) and subsequent pupil educational development in kindergarten and first grade of normative public school. Specifically, the major objectives were to measure this relationship by utilizing the factors of: (1) School readiness at the beginning of kindergarten and entry into the first grade, (2) Academic subject area grade achievement at the end of kindergarten and the first grade, and (3) Teacher ratings of pupil self-esteem and peer-adjustment at the end of kindergarten and the first grade, and reading achievement at the end of first grade. An additional objective was to measure the attitudes of Mexican-American parents whose children participated in the Compensatory Preschool Educational Program.

Procedures: Two basic procedures were followed to secure the data for the study. The first was to record from the subject's cumulative school records: (1) scores resulting from the normal school testing program and (2) academic subject area grades. The second was to record the results secured from the administration of three research instruments constructed by the investigator: (1) Teacher Rating of Pupil Self-Esteem, (2) Teacher Rating of Pupil Peer-Adjustment, and (3) Interview Guide and Questionnaire Parent Attitude Toward School. The data obtained by these methods were computer processed utilizing both two-factor and three-factor analysis of variance models. The factors used were scores from the study's major experimental and control groups, from the experimental and control ethnic sub-groups, and from the Mexican-American and Anglo subjects.

Conclusions: The findings of the study suggest that the Imperial Beach Compensatory Preschool Educational Program significantly alleviated the emotional and social dysfunctions of participant children from poverty ridden backgrounds.

In particular, the program enabled the disadvantaged Mexican-American pupil to achieve skills adequate to out-perform the disadvantaged Anglo pupil in kindergarten and the beginning phase of first grade of normative public school. This apparent overcoming of presumed learning handicaps related to ethnic, language, and cultural differences indicates that the preschool experience is of considerable value to the Mexican-American child as he prepares to live in the Anglo society. Moreover, both the disadvantaged Mexican-American and the Anglo child met teacher expectations as evidenced by academic subject area grade achievement and teacher ratings of self-esteem and peer-adjustment while they were in kindergarten and the initial

phase of the first grade. It is evident, however, that at some point in the first grade the disadvantaged Mexican-American pupil (as well as the nondisadvantaged Mexican-American child) loses the parity with the Anglo pupil which he gained in preschool.

In addition to the preceding, the study showed that Mexican-American parents of children participating in the Preschool Compensatory Educational Program were unusually well informed about their child's educational experience; were critical, yet appreciative, of school teachers; felt "good" about normative public school; and were effectively involved in adult activities at their child's school.

148. Honeycutt, Joan Kartzmark. Relationship Between Disadvantaged Pupil Achievement and Reciprocal Category System-Assessed Reward and Punishment. The University of Florida, 1971. 103p. Adviser: Robert S. Soar. 72-12,477.

The purpose of this study was twofold: (1) to examine the question of whether or not teacher-presented verbal rewards and punishers are serving as reinforcers in a school setting, and (2) to determine if the differential effects of indirect (rewarding) and direct (punishing) teacher control on pupil subject-matter growth would be found with culturally disadvantaged children.

Subjects for this study were 366 culturally disadvantaged first-grade children and their 20 teachers. The sample consisted of both Negro and Caucasian children living in the Eastern United States.

Subject-matter growth was measured through a pretest-posttest administration of Subtests 1 and 5 of the Metropolitan Readiness Tests. Significant pretest differences were found, with the Negro subjects scoring lower on the average than the Caucasian subjects. Children were not randomly assigned to classrooms, so a statistical procedure which reduced the regression effect of gain on pretest was used to statistically equate the classrooms. As significant differences were found on pretest measures between the Negro and Caucasian subjects, adjusted gain scores were calculated separately for the two racial groups. All further analyses were conducted keeping the subjects separate by race.

The Reciprocal Category System (RCS) was used for recording verbal interaction in the classrooms. Measures of teacher-presented verbal reward (indirect control), verbal punishment (direct control), and control ratio (revised ID Ratio) were calculated for each teacher.

A product-moment correlation coefficient of .24 was found between frequencies of the teacher-presented verbal reward and of the student verbal behaviors which they followed. The correlation coefficient of -.17 was found for the relationship between teacher-presented verbal punishers and the student verbal behaviors which they followed. Neither of these coefficients was significantly different from zero.

A $2 \times 2 \times 2$ factorial analysis of variance design was utilized to examine the relationship between teacher verbal behavior and subject-matter growth of students. The three factors considered were sex of the student; high vs. low levels of reward, punishment, or control.

ratio; and grouping of students (heterogeneous vs. homogeneous by race). The factor of grouping was significant ($p < .001$) for the Negro children when Subtest 1, Word Meaning, was the dependent variable regardless of the levels of reward, punishment, or control ratio. Inspection of mean adjusted gain scores revealed that the Negro children in heterogeneous classrooms demonstrated more gain than those in homogeneous classrooms. Analyses for the Caucasian group yielded significant F ratios ($p < .05, < .005, < .005$) for the main effect of sex across the three separate analyses of the adjusted gain scores for Subtest 1. Examination of mean adjusted gain scores revealed that the males demonstrated more gain than the females. No significant effects were found for either group of subjects when the criterion variable was Subtest 5; Numbers.

Twelve separate polynomial regression analyses were conducted; six, each, for the Negro and Caucasian groups. These six tests included one for each of the three independent variables of teacher-presented verbal control regressed against the two dependent variables of adjusted gain scores for Subtests 1 and 5. Analyses were carried out for each of the 12 data sets using the first- through the fourth-degree polynomial functions with the resultant finding of no significant relationships.

On the basis of the finding of no significant functional relationship between frequencies of the teachers' verbal behaviors and of the students' verbal behaviors which they followed, it was concluded that teacher-presented verbal rewards and punishers were not serving as reinforcers for the children in this study. The differential effects of indirect and direct teacher control on pupil subject-matter growth were not found with this sample of culturally disadvantaged children.

149. Jones, Robert Sommerville. The Influence of Tactile-Kinesthetic Experience on Perceptual-Motor Behavior in Disadvantaged Preschool Children. University of South Carolina, 1971 69p. Adviser: Eva D. O'Shields. 71-21,846.

Purpose

The responsive environment setting that characterizes many early childhood education programs stresses independent manipulation of Montessori-like play materials by the child. There is little doubt that manipulation of a device helps the child gain mastery over it. We do not know fully, however, the significance of isolated tactile-kinesthetic experience, outside the realm of problem solving, on subsequent perceptual-motor behavior.

This study attempts to investigate the influence of opportunities for manipulative experiences on skills associated with school readiness performance. The specific experimental hypotheses which the present study is designed to answer are the following: (1) Tactile-kinesthetic experiences will improve matching skills among disadvantaged preschool children, and (2) Tactile-kinesthetic experiences will improve copying skills among disadvantaged preschool children.

Sample Population

Two all-Negro day care centers in an urban, South Carolina location served as the population for this study. Sixty children, equally divided between the sexes, were selected for the two day care centers to serve as the experimental and control groups.

Procedures

From the two day care centers selected to participate in this study, one served as the experimental group and the other served as the control group. Both intelligence testing with the Wechsler Preschool and Primary Scale of Intelligence and readiness pretesting with the Metropolitan Readiness Tests were conducted prior to the treatment period in order to determine if significant differences were present between groups based on these variables. Posttesting with a different form of the Metropolitan instrument was also conducted at the conclusion of the experimental period in order to assess performance gains following treatment.

An analysis of variance was used to determine the significance of differences between groups on both the intelligence testing and the readiness pretesting data. The t-statistic was used to test for significance of differences between means of the Metropolitan pretest-posttest results. Differences were deemed statistically significant at the .05 level.

During a six-week period, each child in the experimental group was provided with a set of two-inch, white plastic numerals and alphabet symbols that are available from a commercial educational materials manufacturer. With each set of numerals and letters, the subject was provided with two cardboard charts. One chart contained the outlines of each alphabet symbol and the other chart contained the outlines of the numerals, zero through nine. In addition, each child was provided with paper, crayons, and a primary-sized pencil. The subjects were allowed to play freely with the materials for a continuous one-hour period each day. No formal instruction related to the materials was initiated by the teacher. The teacher and the classroom aides, however, were allowed to respond to any questions or conversations relating to the materials that were initiated by the children.

Findings

1. Conclusions reached as a result of this study support the first experimental hypothesis related to the improvement of matching skills but fail to support the second hypothesis related to the improvement of copying skills.
2. Further analysis of the data failed to find statistically significant differences in either matching or copying performance on the Metropolitan Readiness Tests when sex was considered as a variable.
3. When pretest-posttest gains were computed for two age groups (4-6 to 5-6 years and 5-7 to 6-6 years) within the experimental group, no significant differences were found in either the Matching or Copying subtest results.

4. Moderate positive correlations were found when intelligence, as measured by the WPPSI, was compared to each of the Metropolitan subtest results.

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